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ABSTRACT

This document presents a two-part monograph developed to focus attention on emergency worker needs. It is designed to aid the paid and volunteer workers who respond to major disasters and should be useful to all agencies engaged in disaster relief operations; to regional, state, and local emergency planners; and to private charitable organizations involved in disaster relief. The monograph should also serve as a resource to mental health service providers planning a comprehensive mental health response to disasters. Part I, "Stress and Mental Health Interventions in Three Major Disasters" (Don M. Hartsough), discusses in detail different sources of stress for disaster workers and their potential effects. Preventive and treatment strategies are outlined. Part II, "Helping the Helpers: A Training Manual" (Diane Garaventa Myers), presents a detailed course designed for mental health trainers to use in helping emergency workers anticipate and prevent stress, and to learn how to get help once they experience stress-related problems. Suggestions are given for developing collaborative relationships between emergency organizations and mental health agencies. A list of relevant audiovisual and printed materials is appended. (NB)

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National Institute of Mental Health

Disaster Work and Mental Health: Prevention and Control of Stress Among Workers

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U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Alcohol, Drug Abuse, and Mental Health Administration

National Institute of Mental Health

Disaster Work and Mental Health: Prevention and Control of Stress Among Workers

CMHSE

Center for Mental Health Studies of Emergencies

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Foreword

When disaster strikes, numerous and diverse emergency service workers arrive on the scene almost immediately. They rescue the endangered, treat the wounded, and support the bereaved. But what do the caregivers themselves need? How can they best be supported in what is often gruesome, unexpected, and exhausting work?

This monograph was developed to focus attention on emergency worker needs, specifically to (1) increase understanding of the problems faced by emergency workers and the likely health and mental health impact on the workers; (2) encourage emergency organizations to address these needs before, during, and after a disaster; and (3) provide a model training package for teaching emergency organizations and their workers how to prevent, ameliorate, and treat mental health problems arising out of emergency work.

Until quite recently, not only were there no programs to meet the emotional needs of emergency service workers, but such needs were scarcely recognized. That situation has begun to change. In major, Presidentially declared disasters, States may now request Federal funds from the National Institute of Mental Health (NIMH) to provide special mental health services for disaster victims. In some recent disasters, local mental health professionals have become aware of the needs of emergency workers and have included them among the victims for whom services were provided. Policymakers are also increasingly aware of the needs of disaster workers. For example, the Federal Emergency Management Agency (FEMA), together with NIMH, sponsored a workshop in December 1984 to consider the problem of role stress and conflict among emergency workers. This workshop was the first step in a new research initiative sponsored jointly by the two agencies to examine this issue. NIMH also encourages and funds research that addresses more broadly the mental health implications of disaster work.

While most of the concepts in the monograph apply to people responding to small-scale events, such as auto or bus accidents and household fires, the focus of the monograph is on the worker, paid or volunteer, who responds to major disasters. This includes but is not limited to frontline fire and rescue workers, including firefighters and paramedics; police and security personnel, especially those who might be involved in body recovery operations; morticians and divers; emergency medical and nursing personnel; professional and volunteer staff members of disaster relief agencies; and members of the clergy who have significant contacts with a disaster-struck population.

The material presented here should be of use to both public and private agencies engaged in disaster relief operations; to regional, State, and local emergency planners; and to private charitable organizations involved in disaster relief. The monograph should also serve as a resource to mental health service providers planning a comprehensive mental health response to disasters.

Part I of this monograph was developed by Don Hartsough of Purdue University and part II by Diane Garaventa Myers of Marin Community Mental Health Services, Marin County, California. The two parts are complementary, and considerable collaboration and sharing of ideas occurred during their preparation. Part I discusses in detail different sources of stress for disaster workers and their potential effects. Preventive and treatment strategies are outlined. Part II presents a detailed course designed for mental health trainers to use in helping emergency workers both anticipate stress and prevent it, as well as learn how to get help once they experience stress-related problems. Suggestions are also offered for developing collaborative relationships between emergency organizations and mental health agencies. The course includes didactic material, activities, and recommended supplementary audiovisual and printed materials.

Disaster work can be an extremely gratifying occupation; saving lives and providing tangible goods to people in distress is obviously a highly important activity. But disaster work also presents significant emotional and physical challenges as well as risks to the worker. Exposure to distressing sights and sounds coupled with difficult working conditions may lead to physical illness or emotional problems. It can also lead to "burnout," with the worker unhappy and unable to perform successfully. Disaster survivors may be hurt instead of helped by the efforts of such a distressed worker. But when workers are given appropriate support in a work situation designed to accomplish organizational goals while at the same time addressing human needs, they usually find their lives enriched by this work, and they are able to maintain a sensitive and caring attitude toward victims.

It is hoped that disaster workers, supervisors, and mental health providers will use the information presented here to attend to workers' emotional needs, both for the protection of the worker and for the optimal care of victims.

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Health Studies of Emergencies
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Part I

STRESS AND MENTAL HEALTH INTERVENTIONS IN THREE MAJOR DISASTERS

by Don M. Hartsough, Ph.D.

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Don M. Hartsough, Ph.D.
Purdue University

Chapter 1

Introduction

Disasters are sudden, unexpected events that cause extensive destruction, death, or injury and produce widespread community disruption and individual trauma. Emergency workers rush in to rescue, treat, help, and comfort the victims. Many researchers have investigated the impact of these calamities on the victims, but few have studied the effect on the worker.

Some of the research on victims is relevant to disaster workers, but most is not because workers are different in several respects. They are protected by extensive training, making it easier for them to cope effectively. They usually do not suffer personal loss in the disaster, and no personal adaptation, such as relocation, is usually required. On the other hand, emergency workers face some difficult situations that victims can avoid. For example, workers may have to collect bodies and pieces of bodies strewn across hundreds of yards of a peaceful neighborhood destroyed by an airline crash. They are often forced to make life-and-death decisions and carry the responsibility for the outcome. Studies of persons exposed to similar experiences have shown varying degrees of negative emotional and physical sequelae as a result of those experiences.

Part I attempts to describe the problems faced by these courageous people and the methods available to help them deal with the emotional aftereffects of their work. Most of the information presented here on disaster workers has been extrapolated from relevant findings about other populations. Three major disasters—the collapse of a walkway in a crowded hotel, a life-threatening flood in a populated area, and the crash of a jetliner—are discussed in detail to illustrate the diversity of problems emergency workers face.

The monograph is organized around stress theory, which states that certain external events (stressors) can put extra demands on the individual (stress) that can lead to physical and/or emotional wear and tear (strain). Emergency workers are subject to a variety of stressors, some arising out of the disaster itself, such as confronting death, and others arising from different aspects of the job, such as time pressures or conflicts. These stressors fall into three general categories: event, occupational, and organizational. A single disaster may produce any or all of them.

Only a few researchers have examined the emotional impact of event stressors on emergency workers. Reports from the field, however, and especially personal and media reports on worker reactions to such major incidents as fatal crashes of large commercial jetliners, have highlighted the potential impact of these disasters.

Studies on the victims of disasters show mixed victim reactions. In some disasters, victims seem to fare well without long-lasting problems. In other disasters, they suffer major mental health problems both immediately and for several years after the disaster. Variables that have been proposed to account for such widely divergent findings include the extent and type of loss among victims, the scope and duration of the event, the extent of horrific or terrifying experiences, and the resilience of the community as reflected in preexisting resources.

Occupational stressors have received considerable attention from researchers, although disaster workers per se have not been studied. Time pressures, work overload, hazardous work environments, and conflicts or uncertainties in the work situation can generate stress reactions. Occupational stress may lead to "burnout," a kind of mental and emotional exhaustion that both interferes with work and leads to frustration and depression.

Organizational stressors arise from conflicts or uncertainties in the worker's role or from organizational conflicts at the worksite. They can lead to frustration, anger, depression, and mental exhaustion.

These three sources of stress may interact, increasing the likelihood of such symptoms as sleep problems, loss of ability to concentrate, irritability, nausea, and tension. Strain may show as physical, behavioral, social, or emotional problems. These effects are described here in detail, along with their prevention and treatment.

Chapter 2

Event Stressors

Most disaster workers are aware that the potential emotional impact on them depends on the type of event (Brown 1983). Riverine floods, for example, are typically less physically and emotionally hazardous for the disaster worker than airliner crashes or major earthquakes. At least three distinct event stressors have been identified: personal loss or injury, traumatic stimuli, and mission failure or human error. The presence of any one of these increases the workers' susceptibility to negative stress reactions.

Personal Loss or Injury

When people lose loved ones or meaningful things, they generally experience grief reactions, which may include depression or extreme sadness and despair. The extent of the reaction is related to the significance of the loss. Although disaster workers are not usually primary victims, those who do lose family members, friends, or property are at high risk for stress reactions.

An injury that leads to loss of function may generate a psychological reaction similar to the loss of possessions. A worker injured during recovery work may be vulnerable to stress reactions, especially when the injury occurs in conjunction with other stressors (Dohrenwend 1981). Injuries may come from many sources, some associated with the event and some with incidental background conditions. Disaster workers have sometimes remarked that "catastrophes always happen in the worst weather." Workers may be exposed to toxic substances or required to help victims in collapsing or unstable structures. Victims themselves may represent danger to their rescuers.

Severe fatigue can also lead to temporary loss of function, and physical exhaustion seems to "come with the territory" in disaster work. Emergency situations often require high levels of sustained and strenuous physical activity. Sometimes these occur after long periods of inactivity, making preparation for them difficult. Long hours are characteristic of disaster work, and even workers who function effectively for extended periods on the job may suffer extreme exhaustion when the task is finished.

Traumatic Stimuli

Severe threats to basic beliefs about the meaning of life can generate stress. Painful deaths, gross violations of physical integrity, or the apparent injustice and capriciousness of life are examples of such traumatic stimuli. Others include contact with bodies, especially those in mutilated or unnatural conditions, and particularly tragic situations such as the deaths of children.

If workers are in extremely dangerous surroundings, especially for long periods, they risk later emotional reactions. In general, situations that are life threatening, or demonstrate the potential vulnerability of the worker, are likely to be traumatic.

Workers in prolonged and emotional contact with survivors who have been severely traumatized by disaster may experience the trauma vicariously. This is especially true when the worker identifies the survivor with a loved one, such as a son or daughter. Workers responsible for life-and-death decisions, for example in triage situations, are also subject to this type of pain. When workers must deny extensive medical care to nearly dead patients in favor of victims with a better prognosis, emotional problems can be anticipated.

Not all people react to traumatic events in the same way. Workers who deal with "guts and gore" on a daily basis are likely to have developed protective strategies through training and experience (Palmer 1983). Reactions to traumatic stimuli are always individualized, that is, interpreted through the worker's frame of mind and feelings at the time of the event. Even the most experienced worker will likely find some events difficult to deal with.

Mission Failure or Human Error

Disaster workers are highly motivated to perform competently and complete their missions successfully. These high expectations, when they cannot be met, may lead to beliefs and feelings about the disaster or the worker's role in the relief effort that cause emotional distress.

One of the attractions of disaster work is the personal satisfaction derived from saving lives, and many workers have a strong need for this type of reinforcement (Graham 1981a, 1981b). When they become highly involved in a rescue effort that ends badly, workers may experience not only disappointment but major personal failure as well, including feelings of unworthiness, even though no rational basis exists for this belief.

Frustrated expectations for success are also illustrated by the mission that requires prolonged expenditures of energy and attention, appears to be going well, but ends in disappointment. Related to this are deaths that occur inadvertently due to some action of the rescue personnel. While long-time disaster workers know that incidents of this nature may occur, they represent the antithesis of worker motivations and efforts.

Another major stressor is the rescue or relief effort that receives intense media coverage, as when a rescue is broadcast live over television. Workers may feel that only a perfect performance is acceptable and that no mistakes will be tolerated.

Finally, in manmade disasters, both victims and workers are often outraged that the event was allowed to occur, and this high degree of anger may interfere with the emotional recovery process. Mission failure or human error may generate a strong sense of powerlessness and helplessness.

Skywalk Collapse

In a given disaster, a worker may experience none of the disaster stressors, or may experience all of them. The skywalk collapse at a major Kansas City hotel provides an example of a disaster in which all three—personal loss or injury, traumatic stimuli, and mission failure or human error—were present, generating potentially significant stress reactions in rescue personnel.

In the summer of 1981, the hotel was host to a series of Friday evening tea dances featuring live music from the swing era. Shortly after 7:00 p.m. on July 17th, the floor was crowded with some 1,500 people, many of them middle-aged suburbanites winding down the week and beginning the weekend (Anderson 1981). In addition to the band, the dancers, and the lobby bar patrons, the midsummer event had attracted media attention—a television news team was there to tape some scenes for a later broadcast. Ironically, the team members had agreed that this was one afterhours assignment they didn't mind because the event they were covering was so pleasant (Miles 1983).

The dance was held in the hotel's architecturally dramatic atrium, which formed the hotel lobby and main entrance (McGrath 1981). The west-facing entrance wall was glass and let in the late afternoon sun. Directly opposite the entrance was the main desk and, above it, a second-story restaurant that looked out over the lobby below. A second restaurant, various meeting rooms, and hallways to the guest rooms were located on the other two sides of the lobby at the second-story level and above. Transversing the front of the lobby entrance were three 145-foot skywalks, each suspended at a different level; these structures allowed guests to observe the lobby below as they crossed from one side of the hotel to the other. The middle skywalk was 15 feet further inward from the front wall than the other two bridges, which were hung one directly above the other. The combination of atrium lobby, suspended walkways, and exposed, glass-sided elevators was a trademark of the hotel chain throughout the country (Facts on File 1981).

The orchestra had just begun playing Duke Ellington's "Satin Doll" when the fourth-story skywalk separated from its supports in the middle of the walkway (Anderson 1981). Witnesses later recalled that the first "small snapping sound" was followed by mounting noise as concrete, metal, and glass bombarded the second-story skywalk and they both came thundering down to the lobby floor, crushing and killing scores of people below (Falder 1982). The contrast could not have been more pronounced—in an instant, the sounds in the hotel were transformed from the silkiness of classic jazz to the grating harshness of concrete tearing away from walls, glass panes exploding and tinkling to the floor, people shouting in surprise as they fell with the walkways, and metal tearing off as pipes broke and support structures bent and twisted. The music stopped. For a moment, an awful silence filled the place. Then people began screaming, calling for loved ones they couldn't see, and shouting for help.

At times of such immense shock, people tend to do what they have been trained to do. Some hotel employees tried to help and comfort guests, while others called for rescue and ambulance assistance. A television reporter dashed to the nearest phone to call his station for additional news coverage (Miles et al. 1983). But it was difficult to describe the full magnitude and nature of the catastrophe. The dispatcher who took the emergency calls couldn't quite grasp what a skywalk was, nor could others make the concept or the consequences of the collapse very clear (Falder 1982). A firefighter who would be in command temporarily at the scene assumed that the assistance call from the hotel was for a minor problem similar to one handled there a week earlier. On his way to the hotel he heard the radio monitor transmit a call for 10 ambulances and knew a major disaster was in progress (Falder 1982).

The first rescuers, who arrived within 3 minutes of dispatch, faced a nearly impossible rescue situation (Falder 1982). Tons of concrete, steel, and rigid sheet metal lay on the floor of the lobby and across the entrance. Glass from the front wall had been turned into dangerous projectiles that seemed to be everywhere. Tables and chairs were overturned, and a fine, white dust covered everything. Water was pouring from broken pipes; it would eventually reach a 2-inch depth in some places before the system drained, as there was no way to turn it off. Blood mixed with water had permeated the carpet. Cries could be heard from mangled bodies and people trapped under the rubble. In the gathering darkness--the electricity had been turned off—witnesses would later recall a surrealistic scene, "like a horrible nightmare" or "heaven turned to hell" (Wilkinson 1983).

By prior agreement the Kansas City Fire Department was in command whenever an accident involved extrication, since the department possessed the necessary skills and tools (Falder 1982). When the department's chief arrived, he established a command post to coordinate the rescue and crowd control operations of fire, medical, hotel, and Red Cross staff; police; architects; and others at the scene. A triage area was set up in a connecting room at the rear of the lobby, and emergency medical technicians (EMTs), physicians, and volunteer nurses from the Red Cross (and others who came on their own) began filling it with the injured, the dying, and the dead. The uninjured and many of the ambulatory injured had already been helped to get outside the hotel.

A number of problems plagued the rescue operation; the preeminent difficulty was summed up tersely in an emergency medical services report: "Rescue efforts were greatly hampered by one overriding problem: access to victims" (Hyatt Disaster Medical Assessment 1981, p. 2). Of great concern were those trapped under the edges of the walkways. They could be seen, but they couldn't be removed, and many of them had sustained life-threatening injuries. Many of these unfortunate people would die, but a significant number would be saved by adherence to the triage philosophy of separation of casualties into categories (Hyatt Disaster Medical Assessment 1981).

A command officer recalled that in his emotionality and extreme concentration on early rescue, he did not comprehend the magnitude of what was happening until an officer requested more space for the triage operation. Looking in the already filled triage area, he counted 70 injured or dead people, and more were being brought in from the lobby (Falder 1982). A 17-year old EMT, still a high school student, had gone to the hotel with his father, also an EMT, and later described the triage room: "It was like a small hospital shrouded with cries of pain, fear, and death. Rescuers were sweating over bloodsoaked sheets" (GEHS Trailblazer 1982).

The triage was moved outside the hotel at the front. Traffic was wildly congested as vehicles entered and left from every direction. Police officers quickly instituted a mandatory traffic control pattern and eliminated the chaos. Ambulances were then able to move quickly and smoothly through the area, entering the hotel's circular driveway, loading victims designated by the triage team, and exiting at the other end of the drive. Later, the triage area had to be moved yet a third time, back inside, when severe weather threatened the Kansas City area.

The paroxysm of pain and suffering in the lobby was intensified for the rescuers because of anguished decisions too often required of them. The presumed dead and the near-dying had to be ignored in order to aid those with a chance to live. Extreme measures were sometimes required:

> One man was entrapped under the lower walkway by his leg. He had to be removed because he had very little blood left in his body. Doctors were doing all they could to keep fluid in his body, but their efforts were to no avail.
>
> The leg had to be amputated, but the angle which the cut had to be made could only be accomplished with a chain saw . . .

> other attempts were performed this way later in the evening.
>
> As grotesque as it may sound, it had to be done—there were no alternatives (GEHS Trailblazer 1982).

Victims imprisoned by the slabs, whether visible to rescuers or not, could not be removed and sometimes even the minimum of emergency care was not possible until the huge objects could be lifted or broken up. This problem occupied rescuers inside the hotel throughout the long night.

The fire department used its "Plan Bulldozer" to bring in equipment necessary to the rescue operation, including a backhoe and two large cranes. The lobby was cleared of all extraneous personnel, and heavy construction equipment was brought to the front of the hotel for a desperate attempt to move the massive walkways. Rescuers used the backhoe to tear down the external glass-and-steel entryway at the front entrance of the hotel to gain access, and then used it in a vain attempt to pry up the slab. The backhoe was far too light and the concrete would not budge. This effort was complicated by many things, including the fact that the upper slab was still leaning precariously at one end (McGrath 1981).

Plan Bulldozer brought not only equipment to the hotel, but men with the skills to operate it—ironworkers and crane operators. They drove the huge projecting arms of the cranes through the upper front wall of the atrium and lowered cables to the floor below. The task of stabilizing and lifting the uppermost of the pancaked walkways was hazardous, not only to rescuers, but especially to those few victims still alive in the rubble.

Then rescuers discovered that the lower walkway could not be lifted without endangering the 10 people trapped beneath it. To reach these victims, the fire department had to rely on another group of hastily recruited disaster volunteers—street construction workers who were working in the area that Friday evening. They brought jackhammers and began the "delicate" work of breaking up the concrete to free those underneath. The fire department's practicing philosophy with all of the skilled workers was to "stand back and let them do their job without interference," and then to resume command when the job was done (Falder 1982).

Firefighters and medical personnel worked to keep air flowing to the victims and maintained voice contact with them to reduce anxiety and fear; at times they crawled under insecurely buttressed sections of the walkway to treat or free a victim. But for the most part the extrication task that remained along the lower walkway belonged to the jackhammer operators.

Operating a jackhammer is physically punishing work, especially for the upper arms, shoulders, and back. The construction workers had come to the Hyatt after putting in a full day's work, and as they proceeded with breaking up the lower slab, the combination of their long day, the physical strain of the work, and the tension of their present task produced extreme fatigue. One highly skilled jackhammer operator, a big, powerful man known simply as Country Bill, personified the spirit of the hotel rescue when he told his helpers that he would be "happy to keep working the hammer if someone would just pick it up" for him and put it in his hands, but he was "just too tired" to pick it up himself (Falder 1982).

It was a long, tedious, tiresome job and whenever a victim was at last brought out of the rubble, the frustration and tension of the long night were temporarily broken, and the watching crowd of rescuers broke into spontaneous cheers and applause (Anderson 1981). A life saved at this point was a symbolic victory over the death and devastation that confronted rescuers all night.

The rescue operation was winding down, the last victim was freed by the jackhammers, and the emergency workers were at last starting to relax, when cranes lifted the final slab. One final painful, devastating shock remained: Where workers had expected to find only a few dead, they discovered 31 bodies (McGrath 1981).

The last of the victims was extricated about 6:00 a.m. Saturday, nearly 12 hours after the collapse. The rescue work was finished, but other disaster workers were identifying bodies and assisting relatives at the temporary morgues that had been set up throughout the night. The long process of recovery and assessment was about to begin.

The final death toll for the hotel disaster was 114; over 200 people were injured, including some of the rescue workers who were cut on glass and sharp metal (Falder 1982). It was estimated that 1,000 people—professionals and volunteers—had taken some part in the rescue (Gist 1983). Rescue workers had found themselves confronted with a disaster situation far beyond their ususal training and equipment; and the bizarre event had forced ordinary people—ironworkers, construction workers, passers-by, and hotel employees—to perform extraordinary tasks.

Discussion

This disaster encompassed in a dramatic manner the event stressors discussed at the beginning of this chapter. Shattered glass, twisted metal, and broken concrete and furniture created a dangerous rubble. Extreme physical exertion was required to remove rubble, carry out bodies and survivors, and bring equipment into the lobby. The bulk and weight of the slabs were significant hazards because they defied removal with equipment that was routinely carried by the responding units. The slabs were finally removed, but many hours elapsed before this could be accomplished. A number of workers were injured, and virtually all were severely fatigued. Although it was not a major factor, the weather represented another stressor when the possibility of a severe storm required the movement of the triage area from outside the hotel to an inside location.

Firefighters at the scene were aware that a senior departmental officer was thought to have attended the dance and had not been located among the survivors. Finding his body represented a special source of anguish for members of this unit (Falder 1982).

The condition of the bodies was greatly disturbing to disaster workers. The collapsing skywalks badly mangled and crushed the victims, creating a grisly scene (Falder 1982; GEHS Trailblazer 1982; Miles 1983; Wilkinson 1983). Other traumatic stimuli were the sights, sounds, and odors of the disaster scene. Blood became mixed with water and dust, creating both a physical hazard for workers and an assault on their sensibilities. The final body recovery task proved shocking when the last slab was lifted and the body count was much higher than anticipated. Workers in the morgue who assisted relatives in body identification were faced with extended contact with bodies and with grieving relatives, although the police practice of using photographs for body identification helped to allay stress levels at the morgue (Eisenburg 1983; Jacobs 1983). The need to perform crude amputations in order to preserve life was also disturbing.

Medical personnel at the hotel faced a special problem in the decisions required by a triage philosophy. At times they had to cut through people who were already dead in order to reach the living (GEHS Trailblazer 1982). The inability to save all the injured may well have induced feelings of failure and a sense of powerlessness and helplessness among some rescue personel. The fact that this was a manmade disaster—presumably caused by someone's negligence—generated feelings of anger and rage in many workers. Such rage may inhibit effective coping, especially if it is not dealt with in a direct manner that allows it to be released and directed at an appropriate target. In this disaster, one researcher found that anger and resentment actually increased over time rather than being dissipated (Miles 1983; Morgan 1983). A buildup of such frustration may reflect a lingering sense of powerlessness or helplessness about the disaster.

Summary

Certain types of event characteristics, either together or separately, have the potential for creating emotional distress in disaster workers: personal loss or injury, traumatic stimuli, and mission failure or human error. When all three of these characteristics are present, as they were at the hotel disaster, the potential exists for particularly intense stress reactions. Such effects, while debilitating, represent very normal reactions to quite abnormal situations.

Chapter 3

Occupational Stressors

Disaster occupations are likely to be stressful because of the types of work required. Heavy work loads, long hours, and the pressure to accomplish difficult tasks quickly are inherent in emergency and disaster work. Further, periods of low activity and little pressure may be interrupted suddenly by incidents that demand great concentration and physical exertion. The stimulation and excitement generated by a large-scale disaster may also lead to stress. During these times, workers are highly motivated to perform their work and may unwittingly subject themselves to occupational stressors as a result of their great desire to "get the job done." Thus, a major source of stress for disaster personnel arises from the nature of the work required. This chapter discusses three occupational stressors: the working environment, time pressures, and work load. A case study of response to a natural disaster is presented. It is intended to acquaint the reader with one of the most commonly occurring disasters (a riverine flood), the origins of stress in these incidents, and how stress is managed.

Working Environment

Adverse environments are common to disaster work, causing physical discomfort for the workers. Noise alone is likely to be stressful, especially with extended exposure (Glass and Singer 1972). Physical conditions frequently make equipment inoperable. In some cases, it is impossible to bring equipment near enough to be helpful. Equipment failure or inaccessibility may constitute a significant source of stress for workers.

The presence of bystanders, especially in large numbers, can become an unwelcome factor in the workers' attempts to manage an incident. Well-meaning but ill-equipped, untrained members of the general public may attempt to assist workers directly, and sometimes become victims themselves.

Time Pressures

Deadlines are a familiar source of stress for workers in many fields. Rescue workers, however, face special problems related to time. Medical emergency protocols may specify strict time limits between injury and the start of surgery, including time to extract the victim, onsite stabilization, and transportation to the hospital and through the emergency room to surgery. The knowledge that there exists an optimum time window for the victim's chance of surviving a severe accident, after which probabilities drop rapidly, is a major source of stress for the rescue worker.

A time stressor is also created by large-scale disasters, which may cause changes in daily or weekly work routines for an extended period. Nonstandard working hours are expected by personnel when disasters occur, but they can become seriously upsetting. Holt (1982) shows that evening or night work may cause disturbances in daily body rhythms (of sleep, body temperature, gastrointestinal function, etc.) as well as disturbances in daily patterns of social living, leading to undesirable mood changes and interpersonal conflicts in the family.

Work Load

Disaster workers are familiar with work overload, a third major category of organizational stressors. Kahn (1980) divides work load into quantitative and qualitative types. Quanitative work load refers to the amount of work to be completed in the available time, while qualitative work load refers to the difficulty or ease of accomplishing the worker's task. Because of the urgencies of task completion in disasters, both types of work overload seem quite probable, although no research has directly addressed the issue. At the other extreme, work underload seems less likely, but might be found in long-term recovery operations, where monotony or tedium might set in (Quinn 1975; Pines 1981).

A related concept is that of responsibility overload (Cobb 1973). During disasters, supervisory workers in particular may be temporarily overwhelmed by several tasks that seem to require simultaneous accomplishment: assessing damages and victim needs, mobilizing adequate resources, establishing a command post, coordinating the work of several types of units, assessing new hazards as they occur, and giving information to the media for communication to the general public. Incident commanders have reported that setting up a command post nearby but somewhat removed from the immediate disaster scene has helped establish priorities among responsibilities and thus avoid excessive overload (Falder 1982; Naysmith 1982).

The majority of incidents requiring disaster personnel do not involve such tragic circumstances as the skywalk collapse. It would be a mistake to think that they do not cause stress, however. As the following case illustrates, there are different sorts of work pressures in these more "routine" disasters.

Flooding in the Deep South

Riverine floods, that is, flooding caused by excess precipitation over large land areas or by melting snow or both, are the most commonly occurring natural disasters in the United States (Edelen 1981). In April 1983, a riverine flood of unusual severity struck the southeast corner of Louisiana and southwest Mississippi, causing several deaths and costing millions of dollars in property damage, lost work, and destruction of natural resources. Heavy rains of up to 20 inches drenched the region during the first part of April, sometimes at more than 1 inch an hour. Experts called the flooding the worst in 20 years in that part of the nation, as 30,000 people were forced from their homes, over 25,000 of them in Louisiana (*Time* 1983).

The flooded parishes (counties) of Louisiana lay east of Baton Rouge, north of New Orleans, and across the Mississippi border at the Pearl River. Parts of New Orleans were flooded, as were suburban areas around the border community of Slidell. The flooded region was primarily agricultural, whereas Baton Rouge and New Orleans were major industrial ports along the Mississippi River, with well-developed petroleum, transportation, and recreation industries.

Many of the residents had previous flood experience, and they sandbagged their homes, removed household goods, or elevated furniture. Most people underestimated the height of the floodwaters, however, or simply could not keep the deluge away from their homes, vehicles, or belongings. Many fought the water as long as they could, finally leaving by motorboat or canoe (McCormick 1983).

Although the flood victims did most of the work and bore much of the expense themselves, they were also aided by several disaster relief organizations, principally the American Red Cross (ARC) and the Federal Emergency Management Agency (FEMA). ARC is a congressionally mandated but privately supported organization, whereas FEMA is part of the Federal Government and determines its disaster preparedness and mitigation policies. FEMA also guides the government's response to Presidentially declared disasters.

In major catastrophes, a disaster relief program is mounted by ARC's national office. Within a matter of hours, planning is begun so that personnel and supplies can be sent to the scene a few days later.

Three types of Red Cross personnel are used on large-scale disasters. Red Cross *professional staff* work out of local chapters or regional offices, usually in a nondisaster capacity. After receiving the organization's disaster training, they may be assigned temporarily to a relief project, usually in their own geographic region, one of three Red Cross regions nationwide. Staff from the national ARC office may also be assigned disaster duty.

The Red Cross may call up experienced *disaster workers on reserve status*. Like the regular staff workers, those on reserve are paid for their disaster work, but unlike the regular staff, reserve workers can choose whether to accept a particular assignment. Reserve workers perform both frontline and supervisory duties and have received specialized training.

The third type of disaster worker is the *Red Cross volunteer*, who is compensated for transportation and living expenses but is otherwise unpaid. Volunteers may be recruited from the local disaster area or brought in from other chapters within the region. They may do frontline work with victims or occupy positions of administrative responsibility. Of the 200 Red Cross personnel who worked in Louisiana during the floods, 78 were volunteers, a typical ratio of volunteers to total staff (about one-third) (Brown 1983).

Most assignments for Red Cross personnel—staff, reserve, or volunteers—are completed in a few weeks, although some may be asked to remain on a disaster project for a more extended period, sometimes up to 3 months. Some Red Cross personnel may work on two or more disaster projects during a year—most by their own choice—consequently not only becoming valued workers but also forming close relationships with coworkers.

Important as the foregoing distinctions are among personnel for administrative reasons, the differences tend to become blurred under actual working conditions. Networks of Red Cross disaster personnel are formed naturally by people who have worked together before. In the Louisiana-Mississippi floods, for example, one group had been assigned to Paris, Texas, the previous year on a tornado project. Also, the commitment to a common goal tends to create a unified spirit and an atmosphere of acceptance for newcomers on a disaster project. Many of the new workers have had their own personal encounter with a disaster. Several volunteers came to Baton Rouge from Fort Wayne, Indiana, where they had become seasoned disaster workers during the 1982 floods.

In any major disaster relief operation, a Red Cross headquarters is established as the organization's command post. It is opened soon after the first professional staff arrive, and it becomes the focal point for administration and the deployment of supplies.

The headquarters in Baton Rouge served the dual function of both local and regional command. It was located in an unpartitioned section on the second floor of a modern office building; except for a few smaller offices, the space was open from one outside wall to the other. Filling the space were the essentials of a disaster relief project—staff workers, office furniture, stacks of paper and supplies, telephones, duplicating equipment, message boxes, conference tables, coffee and snacks, and a seemingly endless stream of visitors, local officials, and Red Cross field workers.

The desks were arranged in rudimentary clusters along the walls to provide a small working area for groups of workers assigned to one of the dozen or so functions required for the project: Public Affairs, Administration, Mass Care, Building Inspection, Labor, Personnel, Accounting, Supplies, Duplication, and Training and Volunteers. Most of the clusters had their own telephones, and each had a hand-printed sign proclaiming its telephone number and duties. Two small offices adjacent to the main area had similar arrangements for Disaster Health Services and Family Services.

During the first crucial days of the Mississippi-Louisiana flood project, when each division was organizing its work and coordinating with others, the large room was often noisy and chaotic. Telephones jangled constantly, and office machines clacked and whirred; small groups of workers vigorously debated priorities and strategy; and when new workers arrived at headquarters, they were greeted enthusiastically by old friends. Accomplishing a task required diligent concentration and an attempt to screen out the din.

The need for mass evacuation shelters in the Baton Rouge area diminished after the first weekend, and they were closed. Most victims who could not return to their homes found temporary housing with friends or relatives. Red Cross workers shifted their focus to helping victims get back into their ordinary routine, which meant assistance with the basics—food, clothing, medicine, and the materials needed for cleanup. To accomplish these objectives, the organization opened several emergency relief centers in churches and schools located in or near the areas of most severe flooding.

Family Service workers generally sat at tables in the relief centers to interview families, one after the other, sometimes for as long as 10 hours a day. Their task was to assess the extent and nature of the damage and to write the necessary vouchers. Although the people varied from one interview to the next, the stories were often similar. Workers tried to make judgments that were fair to both the family and the Red Cross, often with insufficient information.

Vouchers were written for food for 1 week, a change of clothing and a pair of shoes per family member, essential medicine, essential work tools, and mattresses or box springs. When the supply of prepackaged cleanup kits was exhausted, vouchers were also written for cleanup materials.

At times, unusual requests had to be considered, for example, to replace flood-damaged air filter equipment needed by a 5-year-old boy with cerebral palsy. A new bathtub was requested by a man who woke up in his mobile home to find not only 3 inches of water covering his floor, but a cottonmouth moccasin in his tub. He shot the snake with a shotgun, also "killing" his bathtub! (Both requests were approved.)

By Sunday, April 17, a week after the worst of the flooding and 4 days after the relief centers had opened, the chief supervisor for Family Services estimated that 3,600 cases (families) had been processed through the centers in Louisiana. (Mississippi had a separate Red Cross operation.) Approximately 1,400 more cases were expected, for an estimated final case load of 5,000.

The most active relief center by far was in Denham Springs, the largest community in Livingstone Parish. The center processed over 700 cases during the first 4 days; when it opened for interviews at 1:00 p.m. Sunday, people from 40 families were waiting to be registered. The center was badly understaffed during the first week, and workers were overwhelmed. When it became apparent that the early surge of requests for assistance would continue, more personnel and more experienced staff were sent to the center.

In addition to the work being done in the relief centers, thousands of meals were prepared in central locations and delivered by Mass Care van crews three times a day to stricken neighborhoods. Other Family Service and Health Service workers began visiting families in their homes when the floodwaters had receded. One of the most difficult parts of this task was locating the area to visit, particularly when the destination was in a remote section of the parish.

Home visits allowed for more direct assessment of damages and provided another opportunity to give information and emergency aid to the victims. Workers generally found the flooded families quite receptive and coping relatively well with their situations—drying carpets outdoors on the lawn or even on rooftops, throwing away damaged furniture, removing dampened insulation, and mopping or scrubbing interiors repeatedly. Some people were frustrated and discouraged to the point of defeat, but others were hopeful and expected life to get back to normal in time.

After approximately 2 weeks in the field, many of the Red Cross personnel returned home; others stayed to represent ARC in the FEMA centers that were created when the flood was officially declared a national disaster by President Reagan. Some volunteers would not work in another disaster, but for other Red Cross workers, this calamity was just one of many.

Discussion

Disaster workers in Louisiana did not encounter the aura of tragedy that permeates a disaster scene where many people have been killed. There had been no focal point of destruction nor fateful time or place where many people had lost their lives. Even if workers and victims were aware of the official death toll (three people, one a 6-year-old boy), few talked about it during the interviews.

Nevertheless, workers in the Louisiana flood relief project were exposed to all three kinds of occupational stressors. The centers were noisy, crowded, and filled with distractions. In this stressful working environment, workers had to concentrate on hearing victims' stories and making quick decisions and judgments that balanced the needs of the victims and the relief organizations.

All the workers felt time pressure stress, particularly in the first few days when they were getting organized as well as helping victims. They were constantly aware of the many people waiting to be interviewed and their immediate need for essentials--food, clothing, medicines, shelter.

Work load stress is almost a given in disaster work. The Red Cross workers in Louisiana put in long hours, day after day. Those in Denham Springs were particularly overworked before their staff was augmented.

In short, while the working environment was not hazardous, it constituted a stressful situation for workers assigned to it on a full-time basis.

Chapter 4

Organizational Stressors

It may seem paradoxical to describe the worker's organization as a significant source of stress in disasters. Indeed, rescue, relief, and security units assign high priorities to protecting personnel and enabling them to accomplish tasks successfully. That they are also a major source of stress for the worker stems from the intimate relationship between the worker and the organization, especially at a time of prolonged contact and heightened emotion. The worker-organization relationship, which in calmer times may be able to tolerate lapses in performance or problems in communication or administration, is more keenly affected by these deficits during a disaster. Also during disasters, workers spend more time on the job and become highly identified with the goals of the organization (for example, to save lives or control a dangerous environment). At these times, organizational deficits may affect the worker in a more immediate and personal manner than during the normal work routine.

During extreme catastrophes, workers may spend many hours cut off from ordinary sources of support; their world temporarily becomes solely defined by the job to be done. Thus, organizational problems come to have a potent impact on the worker, much more so than during ordinary times.

Organizational stressors in a disaster are closely linked to the type of event that has occurred. For example, a slow-rising, riverine flood produces physical hazards that are qualitatively different from a tornado or the explosion of a chemical manufacturing plant. Disaster organizations strive to create response protocols that are easily adapted to many different types of emergency situations. Efficiency and speed of response are linked to preparation and training, so that organizations attempt to anticipate the most likely events they will face. When a catastrophe is either qualitatively different from what is anticipated (e.g., Three Mile Island nuclear reactor accident) or is of such magnitude as to overwhelm the response system, then it seems reasonable to hypothesize that the potential for organizational stress would be greater.

The following detailed account of potential stressors in an organization is given to provide a framework for assessing individual disaster organizations. It is believed that each factor described here is to some extent modifiable and that constructive changes in the work setting can lead to reduced stress levels.

Organizational Conflict

Conflict within organizations has been viewed as a natural consequence of growth and change (Katz and Kahn 1966). Organizations are not static but undergo constant adjustment and development as dynamic systems, even though the verbal label describing the organization remains unchanged. Conflict can have both functional and dysfunctional consequences. For example, a shift in power may increase the morale of one unit but have the opposite effect elsewhere in the organization.

There is an inevitable link between conflict in organizations and pressure for change (Katz et al. 1980). Conflict occurs when two or more parties do not agree either on the desirability or the direction of organizational changes. When change is resisted (which is often the case), either the change occurs despite the pressure or stability is maintained. The desirability of either outcome depends upon one's position in the system. Conflict over decisions can also occur in an individual who has difficulty making a choice (March and Simon 1958).

Organizational conflict and change are pertinent to organizations that respond to disasters, because both standard procedures and the ability to adapt to unusual circumstances are critical for the success of their operations. Pressure for change may be especially strong when the organization is faced with an event that lies beyond the scope of standard operating procedures. A worker with command responsibilities would find organizational conflict during a disaster highly distressing if it interfered with rescue operations.

Organizational conflict can be expected when people or organizations work together for the first time. Since each unit is accustomed to its own ways of reacting, a period of uncertainty is likely as each adjusts to differences, leading to conflict if the adjustments cannot be made smoothly. Such factors are a source of stress for individual workers, whether the conflict occurs during an emergency with serious time constraints, or during a recovery operation where the differences may exist for longer periods without being resolved.

Low Rewards

Low rewards in the form of low pay or lack of tangible evidence of prestige are logical sources of stress (Holt 1982). Many of the occupations involved in emergency and disaster work are not particularly well paying, despite the fact that they may at times be life threatening and that they involve decisionmaking on which people's lives depend. Such disparity between responsibility and pay can lead to anger, dissatisfaction, and stress.

Role Conflict

All people have multiple roles in their lives and, at times, these roles conflict. Such role conflicts are frequently reported by disaster workers.

Role conflict occurs when a worker is confronted with competing or contradictory demands by other personnel with interdependent jobs (Kahn et al. 1964). Such conflicts can occur among coworkers, between worker and supervisor, and between workers and disaster survivors or the general public. Some workers may feel conflict between their roles as supervisor and colleague.

Role conflicts may also emerge when appropriate professional behavior is different from an individual's expectations for personal behavior. For example, disaster workers are expected to remain calm and unruffled despite provocations by irate victims. As individuals, they would like to defend themselves from attack, or to counterattack. Media personnel report conflict between their occupational role of reporting the disaster and their personal desire to assist.

Health and mental health workers present some special role conflict problems. These people often feel as much or more loyalty to their professions as to their employers. In a disaster situation where both professional and organizational behavior is disrupted and workers feel frustrated, the professional role may take over. For example, a physician may resist the directive to continue triage when he or she feels a greater obligation as a physician to continue treating a specific patient.

A particular conflict occurs when the disaster victims include a worker's family: Work and home responsibilities may be in direct opposition to each other (Laube 1975). Some workers report conflict between their roles as disaster workers and family members when they have to be separated from their families for an extended period of time.

Role conflict extracts emotional costs in the form of tension, dissatisfaction, and lowered self-esteem. The impact of role conflict goes beyond distressing emotions, however, to affect interpersonal communication and trust between workers (Kahn et al. 1964).

Role Ambiguity

Role ambiguity refers to confusion and uncertainty about the nature of one's job, its purpose, and its responsibilities. From the worker's viewpont, role ambiguity arises when the information provided about the work role doesn't correspond to what is required for adequate performance. Ambiguity about roles has been found to produce negative feelings such as tension and job dissatisfaction

(Katz et al. 1980), while its opposite, role clarity, is thought to be an important influence to success on the job (Holt 1982).

Under ordinary circumstances workers may not wish to "rock the boat" by verbalizing their frustrations or tensions about either role conflict or ambiguity. In fact, the worker may realize that a certain amount of subjective discomfort accompanies any occupational role and thus may choose to disregard these feelings. With the occurrence of a major disaster, however, emotions are heightened and feelings of distress that are usually dismissed may become much stronger. In addition, there is an urgent need to talk about feelings after a disaster. The result can be an outpouring of negative emotion, not just about the disaster experience, but about organizational issues as well.

Role Discomfort

In many emergency situations, individuals are called upon to perform tasks outside their usual roles. For example, administrators may be required to become practitioners and vice versa. This role change may not only create tremendous anxiety but may also decrease self-esteem and increase self-doubt if the worker's performance fails to meet expectations. Ironically, positive performance in an unfamiliar task may boost self-esteem and provide some positive experiences that may be helpful later in coping with the emotional aftermath of disaster.

Commercial Airliner Crash

The crash of a commercial airliner and the ensuing rescue operation illustrate some of the potential organizational stressors to which disaster workers may be subject.

The weather conditions in Washington, DC, on January 13, 1982, were in contrast to the usual mild weather. A frigid mass of arctic air hung over the eastern United States, plunging temperatures to record lows in a score of cities. Swirling winds, bone-chilling cold, and heavy snowfall struck the area during the morning and early afternoon. Hundreds of thousands of office workers, school children, and professional employees had been released early because of the adverse conditions, and streets were clogged with stalled and sliding vehicles (Hampton 1982).

Air traffic at Washington National Airport, across the Potomac River from the nation's capital and adjacent to the suburban cities of Arlington and Alexandria, Virginia, was also backed up because of the cold and snow. Flight 90, bound for Tampa, Florida, was scheduled for departure at 2:15 p.m. but did not take off until 3:59 p.m., having been de-iced twice while awaiting clearance. The Boeing 737 had 74 passengers and a crew of 5 (Facts on File 1982a).

Thirty seconds after lifting off, the aircraft faltered, and when it should have been hundreds of feet in the air, it struck a bridge with its tail section and plunged into the river.

Several vehicles on the bridge were demolished, killing four people; the impact of the main fuselage on the water was sufficient to cause nonsurvivable injuries to nearly everyone trapped within it (Dixon 1982). Only those in the tail section had any chance to survive, and the rescue effort focused on these few individuals.

Later, the National Transportation Safety Board (NTSB) would attribute the crash to ice and snow on the wings and engines, plus incorrect gauge readings in the cockpit caused by the accumulated ice and snow (Facts on File 1982b). The false cockpit readings caused the pilot to take off with less than full throttle, according to the report, so that the plane "pitched up" and started to stall. Whatever the cause, the crash was tragic and unexpected.

The actual rescue effort lasted less than 30 minutes, and although it was ultimately successful and at times marked by heroism, there was much confusion and frustration (Esch 1982; Hampton 1982). The aircraft went down on a boundary between several jurisdictions—Washington, National Airport, and Arlington--and it was unclear which one had priority. It is customary for airport rescue squads to be first responders to any crash on the runways, and the crash occurred within a mile of the end of the runway (Esch 1982). Roles were ambiguous until a chain of command could be established and jurisdictional differences settled.

As a result, several units from Virginia and Washington responded; as more calls for help were broadcast from a number of different sources, the response multiplied. What might have started out as an undermanned situation soon became overmanned. One incident commander estimated that more than 400 rescue personnel responded to dispatch or alert calls (the latter should have been standby only), and their vehicles jammed the accident scene while their radio transmissions monopolized the airwaves (Hampton 1982). The pilot of a National Park Services helicopter, one of the first rescuers to arrive, said, "There were too many people, too many agencies, too many false reports that nobody was cutting off" (Baltimore Sun 1982).

The 30° water became more threatening to the survivors with each passing minute. The available marine equipment either could not get through the ice or would not start because of the extreme cold (Hampton 1982); ambulances and other rescue equipment had difficulty getting to the site past the stalled street traffic, delaying help for the victims on the bridge. A further hazard was the large quantity of highly volatile jet fuel spreading across the water and ice. Survivors clung to debris or, while they could, the floating tail section.

Finally, a pilot and his paramedic crew maneuvered a Park Police helicopter, which was not really intended for water rescue, through repeated passes with a life ring to bring five people to shore. At one point the paramedic rode a skid that dipped into the water as he struggled to pull a survivor to safety (McGrath 1982). Other acts of courage and self-sacrifice took place during the brief rescue and will no doubt be well remembered because they were witnessed on national television. A bystander and a firefighter dove into the water to rescue a woman who had lost her grip on the life ring. One of the survivors in the water repeatedly passed the ring to others so they could be rescued, but succumbed to the elements before his turn for rescue came (Rosenblatt 1982).

Rescue operations were suspended at 7:00 p.m., and it became clear that the remaining tasks would revolve around recovery of the bodies in the fuselage and salvage of the aircraft. Investigators were especially anxious to recover the flight data recorder and the cockpit recorder in order to better understand the causes of the disaster. The subzero weather continued for nearly a week as local police and Federal investigators, together with military divers and salvage crews, completed their work. By January 21, with the discovery after days of futile searching of the "black box" flight recorders, the operation was considered "over the hump" (Hampton 1982).

The airline disaster was unique in that it happened in the heart of the nation's capital, within 2 miles of the White House. As a result of location (and the full media coverage devoted to it), the rescue and salvage operation was closely monitored by an unusual number of governmental entities. For disaster personnel, the tragedy had entailed exposure to the elements, frustration, a sense of futility and helplessness, and finally, being in the watchful eye of a host of supervisors.

Discussion

The rescue operations following the crash of Flight 90 contained a number of organizational stressors. The organizations themselves were, first, uncertain about who should be in charge, and finally, in conflict about their leadership roles. Two independent sources reported that workers felt that the situation was oversupervised during the body recovery operation (Johnson and Deitz 1982; Mitchell 1982a). For instance, the atypical assignment of officers from the Internal Affairs Division of the Metro Police Department to onsite supervision of body recovery personnel was interpreted by some workers as a lack of trust in their professionalism (Johnson and Deitz 1982). The presence of officials with leadership roles in national emergency and disaster work was also noted by the workers.

Several workers were exposed to role conflict, role ambiguity, and role discomfort. A firefighter became a swimmer. A Park Police helicopter pilot became an instant expert on water rescue operations. Many, many active, energetic, and well-trained rescuers had to stand by and watch, or worse yet, get stalled in traffic and wait.

A major organization stressor can reasonably be attributed to the location of this disaster in the nation's capital. On the one hand, the crash location gave local units more backup than would be true of almost anywhere else in the nation. On the other hand, it may have added to the number of people who felt pressured to become part of the rescue and recovery operation.

Finally, in addition to the pressure on workers performing the rescue and recovery operations, the presence of the media and the extended national newsworthiness of the disaster story may have escalated the tendency for anxious oversupervision. Under these conditions, it was likely that conflicts within the whole emergency system would emerge, organizational norms and expectations would be violated, and organizational stress would appear (Kahn et al. 1964).

Chapter 5

Effects of Stress on Disaster Workers

In the preceding chapters, common experiences and conditions of disaster work that may be experienced as stressful were identified. One source of stress is the acute experience of an event and its aftermath—personal loss or injury; traumatic stimuli; and mission failure or human error. Other stressors arise from the ongoing occupational situation of the worker before, during, and after disastrous events. It is now time to examine the potential impact of such experiences and conditions on the worker.

In general, severe acute or chronic stress may be manifested in three ways: physical, behavioral and social, and emotional problems. Each of these is discussed separately.

Physical Problems

The immediate physical consequences of exposure to a stressful event include heightened preparedness for taking action and responding to an external threat. Heart rate, blood pressure, and muscle tension increase, producing speeded-up metabolism, added energy expenditure, and heightened concentration. Given small enough doses and some measure of individual control over their timing and elevation, these physiological changes give additional strength, produce highly focused behavior, and generally assist in task performance. If the physiological changes are extended for too long, occur too frequently, or become too intense, however, physical discomfort can become severe. Gastrointestinal tension ("knot in the stomach"), nausea, muscle tremors or cramps, heart palpitations, ringing in the ears, muffled hearing, or profuse sweating may all be experienced. On the other hand, workers may be highly energized by physiological changes and want to work to the point of exhaustion, sometimes refusing relief breaks even from arduous or stressful activities.

Following an event perceived as highly stressful, physical illnesses or symptoms, especially nausea and gastrointestinal disorders, are fairly common. For example, within 2 days following the coliseum disaster in Cincinnati, which occurred December 3, 1979, two-thirds of the mental health team members who responded by helping families in the morgue became physically ill. Although their symptoms were transitory, the incident shows that even experienced mental health personnel are not immune to postdisaster illness (Umbenhauer and Winget, unpublished manuscript). Emotional stress may be greatly increased if physical symptoms following disaster work are perceived as a possible consequence of the disaster itself (e.g., exposure to radiation, toxic substances, or contagious disease).

One study of rescue and morgue workers from the hotel disaster found that 20 percent of the sample reported new or exacerbated musculoskeletal problems during the postdisaster phase, another 13 percent indicated that respiratory and gastrointestinal problems had increased, and 11 percent complained of neurological problems (Miles et al. 1983).

Some workers involved in the airline disaster were still experiencing physical symptoms 8 weeks after the event. Headaches, nausea, decreased appetite, and constant fatigue were common, although the overt physical symptoms were reported to be gradually decreasing over time (Mitchell 1982a).

Both acute stressors, such as those characteristic of a disaster event, and chronic stressors, such as difficult working conditions, have been linked in research studies to various kinds of severe illness including peptic ulcer, colitis, heart disease, hypertension, and even cancer and infectious diseases. Such studies do not indicate that stress "causes" disease, but do suggest that stress may be a risk factor, even though the mechanisms involved are not understood. For example, it is well established that a heavy cigarette smoker is at increased risk for having a heart attack, even though the reason for that increased risk has yet to be established (Elliott and Eisdorfer 1982, p. 257).

To say that stress is a risk factor for many types of disease simply means that it increases the chances for illness. Other factors, such as genetic or biological predisposition or exposure to a virus, may be necessary in addition to severe stress for disease to occur. The stress involved in disaster work, then, may help to precipitate both short-term and long-term illness.

Behavioral and Social Problems

Severe stress may lead to various undesirable behavioral and social problems, ranging from short-term and self-limiting to long-term and serious.

Withdrawal from family and friends often accompanies severe stress. Some emergency workers withdraw because they believe their families cannot understand what they are going through; others withdraw because they want to protect a beloved family member from the terrible aspects of the job. Such withdrawal, however, often leads to alienation of family members from one another and tension and strain in the family. When work hours are long and irregular, such family problems may be intensified.

Increased alcohol and drug use (both licit and illicit) may also be associated with stress. In Corpus Christi, following the destruction caused by Hurricane Allen in 1980, liquor wholesalers supplying the hotels occupied by disaster workers reported a noticeable rise in sales. Increased use of alcohol as a way of dealing with stress can lead to its own set of serious physical and behavioral problems.

Emotional Problems

Stress reactions to acute events, such as working in a major traumatic disaster, tend to be dramatic and to have discernible causes, whereas stress reactions to more mundane, chronic situations may be less severe in intensity but more intractable. These are discussed separately.

Emotional Reactions to Event Stressors

Clinical interviews with workers during or shortly after disaster assignments show evidence of both affective and cognitive problems. The most frequently observed immediate reactions are anxiety (Mitchell 1983b), fatigue (Frederick 1981; Taylor 1983), frustration, anger, irritability (Mitchell 1983b), hopelessness, and moments of melancholy (Mitchell 1983b; Taylor 1983).

Workers have reported onsite disturbances in work performance, which are exhibited as short-term memory loss, inability to use logic to solve problems, and difficulty in understanding or communicating with coworkers (Mitchell 1983b). These symptoms are often accompanied by feelings of being overwhelmed by the challenges of the task. Longer term problems may include some of these symptoms plus depression.

Lifton (1967) was one of the first investigators to note psychological impairment in rescue workers, having observed long-lasting emotional reactions such as "psychic numbing," "death imprint," and survivor guilt among those who assisted victims of the Hiroshima atomic bombing. More recently, general depression, a sense of loss and grief, and guilt were noted during a stress management program for rescue workers held 8 weeks after the crash of Flight 90. Some of these workers also reported sleep disturbances, nightmares, and decreased sexual interest (Mitchell 1982a).

Researchers who, at 3 different times, evaluated 97 workers who had handled body recovery and identification in the 1979 Antarctica DC-10 air crash found that 42 percent of the sample were highly distressed during at least 1 of the evaluation periods. As long as 20 months following the air crash, 23 percent of the subjects were experiencing "high stress" (Taylor and Frazer 1982).

Psychological reactions to a major traumatic stressor have been described as typically consisting of two alternating phases: intrusive and avoidance or denial. In the intrusive phase, unwelcome thoughts are frequent, persistent, and unavoidable, and sleep disturbances are common. The individual may be overwhelmed with anxiety and thoughts about the experience, often accompanied by vivid invasive sights, sounds, and smells. Since these intrusive experiences are uninvited, the sufferer may struggle to control them or to drive them from consciousness.

Behavior in the intrusive phase may take many forms. A person may suddenly begin to cry "for no reason." Things that were emotionally neutral before the trauma will suddenly take on new significance; for example, barbequed meat may become a strong reminder of burned flesh. This pairing of a previously neutral stimulus with the trauma is particularly disturbing to individuals by virtue of both the unwelcome recollection and the surprise of the intrusion.

The nature of such stimuli are very difficult to identify and anticipate because they are highly idiosyncratic and may involve the entire range of sensory receptors (visual, auditory, olfactory, tactile, and taste). These stimuli may be very specific (e.g., the sound of metal on metal or glass breaking) or very broad (e.g., night or rain).

Stimuli that trigger a recall of the experience—such as seeing other participants—will also trigger a partial reliving of the emotions associated with it. When normal defensive controls are relaxed, as in sleep, the painful experience may also recur. Nightmares and involuntary "daymares" are examples of intrusion.

Alternating with the intrusion phase may be periods of emotional numbness. The emotional quiescence experienced during this phase is not true peace and calm, but instead successful avoidance of the pain associated with the upsetting experience. The general affective level of people in this phase is quite flat and may be easily mistaken for calm and contentment. During this phase one consciously attempts to stop thinking about the event, avoid reminders, and overcontrol feelings, so that even talk about the experience is flat and devoid of affect. A person reacting to a traumatic stressor may experience many repetitions of both the intrusive and avoidance phases. The alternation of these phases or periodic independent occurrences is quite normal and may represent the emotional equivalent of biting off small pieces of the traumatic experience and protecting from overload as a mechanism for eventually coping with and managing the experience (Horowitz 1976; Horowitz et al. 1979; Horowitz et al. 1980).

In its most severe form, the emotional reaction to traumatic stress may be classified as a mental disorder, posttraumatic stress disorder (PTSD). PTSD is characterized by a multiplicity of physiological and psychological disturbances such as hyperalertness, an exaggerated startle response, sleep disturbance, memory impairment, recurrent dreams, feeling of estrangement from others, and survivor guilt. Readers should be cautioned against the frequent or premature use of PTSD as a label. People who have been involved in disasters may experience several of the disturbances noted above without meeting the specific diagnostic criteria for PTSD as described in *The Diagnostic and Statistical Manual of Mental Disorders*, third edition (American Psychiatric Association 1980). Only well-trained mental health clinicians are qualified to make such a diagnosis.

The Kansas City hotel disaster workers experienced a variety of emotional problems following their rescue and relief efforts. The overwhelming first response of relief efforts upon entering the lobby or triage areas was stunned, total shock (GEHS Trailblazer 1982; Miles 1983). The sudden assault to sensibilities produced an array of symptoms, most notably cognitive disturbance and emotional numbing or the opposite reaction, exaggerated emotionality. Cognitive disturbances included an inability to grasp the scope of the disaster and "not seeing" what was there (Miles 1981). For example, one incident commander reported that he did not comprehend the enormity of the disaster until his triage area became overcrowded (Falder 1982).

Extremes of emotion were experienced—terror, fear, horror, revulsion, and agony (Miles 1983). Some workers, both professional and volunteer, were so overwhelmed by their own powerful reactions that they left the lobby in spite of their desire to stay and help (Falder 1982).

Since the initial response to such an overwhelming experience is likely to be profound shock, other reactions may not emerge right away, nor in fact for several weeks. One worker reported that he went home the morning after the disaster and sat, staring out the back window, for nearly the whole day (Miles 1983). Other later symptoms of workers included heightened irritability, nervousness, difficulty concentrating, sleep disturbances, and hypervigilance for disaster cues—sirens, faces of people seen in the hotel—and avoidance of balconies, overhead bridges, and large buildings (Miles 1983; Morgan 1983; Wilkinson 1983).

Wilkinson (1983) surveyed 102 disaster participants including 48 rescuers and offsite workers. He found that approximately 90 percent of the total sample suffered repeated recall of the event, and in 20 percent of these the recall was severe, interfering with daily functioning. About 50 percent complained of fatigue, anxiety, or depression. Half the subjects reported sleep disturbances, and almost one-quarter had nightmares about frightening events. Slightly less than half reported exaggerated startle responses (sometimes with embarrassing overreactions) and difficulty concentrating at work. About 45 percent reported guilt related to the disaster. The feeling of having wanted to do more to relieve pain and suffering or to prevent death was reported among all subjects, but was more frequent among rescuers. Many of the guilt feelings were associated with a specific situation--an injured person who could not be kept alive, or a rescue effort that was performed too late to be effective. Fifty-five percent of the workers expressed anger; 20 percent of these had generalized anger, while the remainder were angry at specific targets connected to the disaster.

Another study also found anger to be a common reaction to this disaster (Miles 1983; Morgan 1983). Anger was often accompanied by a strong desire to fix blame for the incident. In fact, anger and resentment actually increased in intensity over time rather than decreased. In this regard, the incident was consistent with other manmade disasters, where resentment toward the presumed cause has been significantly evident among survivors (Erikson 1976; Frederick 1981).

There were individual differences among workers in regard to the level of distress experienced and the ability to work through it successfully (Jacobs 1983; Miles 1983; Wilkinson 1983). The source of these differences was probably a complex interaction of variables such as work assignment (lobby vs. morgue), duration of time onsite, amount of contact with the dying or injured, extent of training or preparation for the tasks performed, and personality differences.

One EMT, for whom denial served as the primary means of coping with the experiences, reported on videotape,

> Seeing people dead and injured--it hurts--but at the time you block it out, you're there for one reason. . . . The only thing I could do was stay away from it--block it out (after the incident). I tried to forget it, block it out, not to read about (it), not watch it on TV . . . there was no such thing . . . I just wanted to be left alone. If I didn't think about it, then it never happened . . . . I felt if I talked about it, then I would be extending the suffering and pain and agony to someone else (Miles 1983).

Even though the interview was recorded over a year after the incident, this worker stated that he was only beginning to work out his emotional response to the tragedy.

The hotel disaster generated relatively high levels of emotional problems, no doubt the result of the severe, potent, and numerous stressors that characterized the event. Onsite workers had to endure the frustration of being unable to complete the rescue operation but also being unable to leave a scene of unspeakable death, injury, and pain.

Emotional Reactions to Occupational Stressors

Reactions to traumatic events are frequently so dramatic that the worker has no difficulty associating them with a specific disaster experience. In contrast, reactions to occupational factors are more insidious. Stressors such as work overload and role ambiguity are subtle, so that their effects increase gradually, perhaps going unrecognized but eventually leading to the physical, emotional, and mental exhaustion popularly labeled burnout. Burnout is thought to occur frequently among a wide variety of human service workers (Cherness 1980; Edelwich and Brodsky 1980; Pines and Aronson 1981).

There are many signs and symptoms of burnout, and these vary in intensity from mild to very severe. Burnout may first appear as work avoidance or diminished enthusiasm for work. Depression, helplessness, hopelessness, and feeling trapped in an unsatisfactory work situation may follow. Another sign is diminished control over emotions, such as uncontrollable crying. Physical fatigue, gastrointestinal symptoms, frequent headaches, and other evidence of somatic tension may also occur. If the burnout symptoms reach such intensity that the worker's distress is frequent and overt, serious health problems may occur.

Burnout often shows in changed attitudes of the worker toward self, work clientele (e.g., victims), and family. Lower self-esteem and self-confidence may appear. Also, "burned out" workers sometimes see victims as the cause of their own problems ("blaming the victim"), and relate to survivors only as members of a group rather than individuals (stereotyped perceptions). In short, burnout causes a feeling of dehumanization—a decreased awareness of the human attributes of others and a loss of humanity in interpersonal interactions (Pines and Aronson 1981).

Burned out workers typically describe their work as unrewarding and see the organization as unsupportive and unappreciative. Low morale, tardiness, absenteeism (sometimes alcohol related), and high job turnover are longer term results.

The consequences of burnout spread to the worker's family and to the victims being served. Some victims feel embarrassed, self-conscious, or guilty for needing help, and interacting with a burned out worker is likely to increase these feelings rather than ease them. The result for survivors is a double dose of disturbing interactions—one with the disaster agent and the other with a distressed disaster worker.

Stress in one area of a person's life usually has some type of destabilizing effect upon other areas. Thus occupational stress affects disaster workers' relationships with their families. Attempts to compartmentalize life to avoid these "spill-over" effects are typically unsuccessful. The interrelationship between a person's occupational functions and family functions is among the least explored and least understood areas in the mental health field. They are intimately related and this relationship can be the source of either greater stress or compensation when things go poorly in one of them.

Interactions of Stress Reactions

Emotional reactions to event and occupational stressors have been presented separately, but in some circumstances it may be very difficult to distinguish between them. Reactions to such stimuli are probably additive in producing observable negative outcomes. Since experiencing either type of stressor lowers a worker's psychological defenses, it seems reasonable to expect that suffering from both sources of stress in the same disaster would be very damaging to the worker's health and well-being. The interaction of the two stress patterns, in other words, may enhance the effects of each, so that a worker already at risk from one is highly vulnerable if exposed to the other.

Chapter 6

Mental Health Services for Disaster Workers

Disaster workers are often trained in responding sensitively to victims, in treating them with dignity and concern for their emotional and physical needs. More rarely are they taught about their own emotional needs, despite the fact that emergency disaster work is by definition difficult and demanding. It is important to note here that, just as with disaster victims, the emergence of disturbing and sometimes dramatic emotional problems in workers is a natural result of the obliteration of normality that disasters represent. Disaster workers who experience these problems should not be viewed or dealt with as if they suffered from mental illness. They are responding normally to very abnormal situations.

The previous chapters suggest elements for a strategy aimed at enhancing the health and coping mechanisms of disaster workers. Ideally, such a strategy should consist of three parts: prevention, early intervention, and followup and treatment, each of which is discussed below.

Prevention

Prevention refers to active attention by the organization to the planning and organizing of work to maximize worker mental health. It also includes recognition of and planning for the potential impact of repeated exposure to single repetitive, dramatically stressful events.

The first step must be analyzing, with the workers' participation, the organization's structure and working environment, paying careful attention to the organizational factors that increase stress. The next step would be to include both preservice and inservice training and preparedness activities for workers. The objective of such programs would be to help workers become less vulnerable to the harmful effects of stress, by learning more about stress and by learning ways to cope with traumatic events. Such training should be an integral and ongoing part of regular training programs. The specialized training should fit naturally into the ongoing training of individuals who are used to learning new technologies and learning how to protect their own safety. Protecting emotional safety is just as important as protecting physical safety.

The training should begin with an appraisal of the stressors that are likely to occur in emergency work and the stress reactions that typically follow. Alternatives for coping with likely stressors can be reviewed and evaluated. An important factor in this evaluation is the linking of coping strategies with the situations to which they apply. In some situations a problem-solving or action strategy may be the most effective approach, but in others it may be unworkable and only produce more frustration on the worker's part.

Workers may then be helped to acquire techniques and skills for coping with stress. These may include cognitive techniques such as positive self-statements that help to stabilize and reinforce the worker ("you're doing fine--keep on track, but don't get rushed") or redefining unsavory sights to make them less threatening. For example, Taylor and Frazer (1982) found that in order to cope better with the stressful tasks of body recovery, workers created images of the bodies as some kind of object--frozen or roasted meat, airplane cargo, products of waxworks, or scientific specimens.

Teaching ways to recognize one's own signs of stress and to minimize harsh self-criticism should also be included in the training. Practice in defining or expressing one's feelings and sharing these with coworkers may help workers to be more sensitive to their own stress levels and more willing to seek help and provide assistance to coworkers.

Physical conditioning for stress prevention should also be addressed in the training program. The importance of exercise, diet, relaxation and recreation, and the maintenance of supportive interpersonal relationships all help to strengthen the individual against stressful experiences. Some nonproductive coping behaviors, such as excessive use of alcohol or other drugs, could be discussed in this context.

The organization should also formulate a plan to assist workers in dealing with participation in a major incident. Such a plan should include an active affiliation between the organization and the mental health resources to which it has access. The plan will probably not work if it exists only on paper. A close relationship with a known and trusted mental health resource can be a significant aid in either preventing or mitigating worker stress when a major incident occurs. Such a relationship could be developed through the following activities:

- Mutually compatible service goals, such as inservice training activities, can be planned as a way for each organization (disaster and mental health) to learn about the needs and objectives of the other so that perspectives may be shared, possible problem areas anticipated, and a working relationship established.

- As opportunities are presented, mental health personnel could be incorporated into nondisaster emergency work, for example, by providing onsite consultation for victims and serving as a referral source for workers.

- Resources may be developed within each structure to relate to the interests and needs of the other—i.e., a disaster planning committee within the mental health organization and a mental health preparedness committee within the disaster organization. The utilization of mental health resources within the emergency organization (e.g., police department psychologist) should not be overlooked.

Early Intervention

Early intervention refers to activities both at the scene and immediately after an incident that are designed to assist workers in coping with the event. The goal of the intervention is to interrupt negative processes or minimize their influence. Intervention with workers at the scene of the disaster may include actions by an incident commander and crisis counseling by a mental health worker, while intervention shortly after the disaster, when workers are still actively coping with emotional effects, is best done by a trained mental health worker.

Onsite Intervention

Services performed at the disaster scene may consist of either prevention or crisis counseling. Incident commanders may be able to prevent prolonged exposure to stressors or provide some measure of protection to workers through support and relief actions. For example, the commander could ensure that workers are provided adequate rest periods and could rotate workers so that exposure to the most gruesome scenes is minimized for any one individual.

Crisis counseling by a trained mental health practitioner can aid the worker who has become distressed in the performance of duties at the scene. A rapid assessment of the situation, onsite consultation with the distressed worker, and a disposition appropriate to the condition of the worker and the needs of the incident commander are all appropriate roles of the mental health provider. Crisis intervention principles should be followed, such as isolating the immediate problem and focusing on it, and encouraging the ventilation of feelings and the use of positive rather than negative self-statements. Information obtained through worker contacts might be useful in determining whether workers should go back to the job, be transferred to less distressing tasks, or be released from work. A preferred goal might be the immediate return to full duties at the scene, because this restores the normal working pattern for both the worker and the organization. Alternatively, there may be reassignment to less distressing types of work or temporary release from duties at the disaster scene.

Onsite intervention might also be useful in management decisions, especially during extended rescue or relief operations. Consultants may be requested to review operations for time pressure, work overload, organizational or interpersonal conflict, ambiguity or conflict in worker roles, and the presence or absence of support.

It is important to note here that any intervention by a mental health consultant who is not part of the responding organization must have the sanction of the incident commander. Interventions that are not acknowledged and approved by the incident commander will only interfere with work in progress and may create added stress for workers. It is highly desirable that goals for onsite intervention be met through an agreement that exists *prior* to the time of the incident.

Early Postincident Intervention

The major goal of services to workers immediately following involvement in a disaster is to minimize the severity and duration of emotional trauma by helping workers to understand and cope more effectively with their own and each other's reactions. The mental health consultant's goal is to help those who have been involved with the disaster deal with their emotions by allowing expression of those emotions, and helping workers understand that having such feelings is not only normal but also a part of the healing process. Workers who have not begun the emotional reconciliation process can be helped to anticipate the psychological effects they may experience in the ensuing weeks.

A structured debriefing program on either a group or individual basis within 2 weeks following the end of the incident is recommended. Everyone who participated in the event, including workers from services other than the sponsoring organization, should be included in debriefing programs. Other perspectives may add to the richness of the debriefing process, especially in a group setting.

Jeffrey Mitchell, of the Emergency Health Services Program in Baltimore, Maryland, has published guidelines for stress debriefing (1983a, 1983b). Mitchell, who uses the term critical incident stress debriefing (CISD), applies his procedures to both routine emergency work and disasters. Mitchell describes two forms of CISD: an initial debriefing immediately after the incident and a more formal CISD 24 to 48 hours postincident. The initial session may occur spontaneously during cleanup procedures and is most often led by command officers. For maximum positive effect, the atmosphere for this session should be positive, supportive, and based on care and concern for the team members. Everyone should be allowed free expression of feelings, which should be greeted with acceptance, support, and understanding. A mandatory team meeting as soon as possible after the conclusion of the incident appears to be the best format.

A formal CISD typically is led by a mental health professional experienced in crisis counseling and emergency work and/or familiar with rescue and relief procedures (Mitchell 1983a, 1983b). Professional preparation is considered necessary for the role as facilitator because of the intense emotions released during the sessions. The facilitator should be skilled in group communication and dynamics and able to assess quickly and to assume leadership in stressful circumstances.

The content of Mitchell's program is as follows:

- An *initial phase* for introducing the facilitator, outlining confidentiality, and explaining the purpose of the session
- The *fact phase* for eliciting from members of the group what activities they performed at the incident and what they heard, saw, smelled, and did as they worked at the scene
- The *feeling phase* wherein the facilitator encourages members to share with others the feelings they had at the scene and are having now, and whether they have ever had these before
- The *symptom phase* where the facilitator focuses on the psychological and physical aftereffects that the workers have experienced since the incident
- A *teaching phase* in which workers are reminded that the symptoms they have experienced are normal responses to extraordinary circumstances and the rationale for a stress-response syndrome is explained
- A *reentry phase* to conclude the group's activities, answer questions, and allow the group to develop a plan of action if it wishes

The CISD is quite distinct from an incident critique session. It focuses on the psychological and emotional aspects of disaster and emergency work and should not be used for critically reviewing emergency or routine procedures or finding fault with what occurred during the incident. The spirit of the meeting should be kept as positive and supportive as possible in order to encourage workers to accept their own distressing feelings and to support one another. This provides an implicit permission to expose the human, vulnerable side of one's self without the danger that one may be criticized at the same time on actions taken at the scene. The incident critique should be held separately from the CISD.

Debriefing offers many advantages for emergency and disaster organizations. It is a specific, focused intervention procedure for releasing pent-up emotions when the intensity of such feelings is likely to be quite high. Further, the debriefing process can aid distressed workers by teaching them how to use specific skills for coping with stress and providing support for each other. Finally, it is an opportunity for workers to request further professional help if they feel it would be useful.

Followup and Treatment

It is now recognized that the normal adjustment process following exposure to an intense and distressing experience may take many weeks and not all people can adjust satisfactorily without some assistance. Thus, some means of monitoring the adjustment of individual workers who have been involved should be established. This may be done through routine supervisory or medical checks or special training or interview sessions. Such activities aid in assessment, provide another opportunity for workers to express their feelings and be reassured about their normality, and make mental health services available for those who need longer term professional attention.

Therapeutic interventions for distressed workers should be short term and should emphasize an active, directive approach (Mitchell 1983b). Most workers become impatient with a client-centered approach but tend to respond favorably to behavioral management techniques targeted at symptom reduction. Since workers who become highly stressed may have adopted faulty stress reduction techniques (e.g., high alcohol consumption), the mental health worker may have to teach removal of old strategies before new ones will be successful.

Finally, it must be pointed out once again that a well-established working relationship between a disaster organization and a mental health resource operates to the advantage of both parties. Working together on a continuous basis increases trust, broadens the perspectives and knowledge of both sides, and makes for greater efficiency when mental health services are required.

Conclusions

Disaster workers are at risk for harmful health and mental health effects following disasters and should be considered as groups for whom services may be needed and should be designed. Strategies for mental health services are focused upon prevention, early intervention, and followup and treatment approaches. Preventive approaches involve both educational and organizational design intervention. Educational approaches are most effective as part of a preservice or inservice training program. A strategy of early intervention can be implemented while a disaster is occurring or shortly thereafter. Consultants who are conducting a critical incident stress debriefing should be knowledgeable about disaster work and cleared through the command structure. The debriefing is an effective means for ventilating feelings, giving emotional support, teaching healthy coping, and giving the worker opportunities for further services if required. Followup and referral are best performed in the context of an ongoing relationship between mental health and disaster agency organizations.

The conclusions reached through part I of this monograph take note of two critical aspects of the psychology of disaster work. On the one hand, the performance of duties during disaster rescue and relief operations carries high emotional risk and exposes the worker to situations that may produce harmful stress for the worker, the worker's family and loved ones, and disaster victims. On the other hand, those who have chosen to respond to disasters are usually highly trained and highly motivated to ease the suffering of survivors, to perform their work well, and to support each other in the course of their jobs. On the basis of these two dynamic qualities, intervening in the emotional aftermath of disaster seems both realistic and necessary.

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Part II

HELPING THE HELPERS: A TRAINING MANUAL

by Diane Garaventa Myers, R.N., M.S.N.

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Introduction

Part I of this monograph is designed to focus attention on the needs of emergency service and disaster workers; increase understanding of the problems they face; describe the likely health and mental health impact of disaster work on the workers; and encourage emergency and mental health organizations to develop plans to address worker needs before, during, and after a disaster. The present part of the monograph is designed as a training manual to help agencies meet these worker needs.

The manual is intended primarily for trainers who are mental health professionals with training responsibilities related to local disaster plans and personnel. These professionals could be employed by local mental health agencies, employee assistance programs, or emergency service organizations. Proposed trainees include any professional or volunteer workers who are responsible for disaster response or recovery operations and who have significant contact with disaster victims. These workers include but are not limited to fire department personnel; emergency medical services staff (paramedics, emergency medical technicians, emergency room nursing and medical staff); police and security personnel; search and rescue personnel (divers, climbers, heavy equipment operators, and the like); coroners and morticians; staff of disaster relief agencies; clergy; and health and human services and mental health staff themselves. This material may also be useful to agency personnel at the planning or administrative level who are concerned with the functioning and health of emergency workers. The concepts apply equally to workers who respond to major disasters and those who handle small-scale events, such as automobile accidents, fires, or emergency medical calls. The manual can be used to develop prevention and intervention programs to address the stresses inherent in emergency services in both disaster and nondisaster times.

Each section of the manual consists of didactic material, which may be presented in lecture form or distributed for class reading, plus lists of supplementary materials and classroom learning exercises at the end of each section. While the entire manual represents a comprehensive training program, trainers with less time allotted will want to adapt the material to suit their needs and the needs of the particular group of trainees.

Section 1

Before the Training Begins: Collaboration Between Mental Health and Emergency Services

Why Collaboration?

An extensive review of the literature on the psychological aspects of disaster reveals a wealth of knowledge about the effects of disaster on disaster victims: individuals, families, and communities. Hundreds of articles address emotional and psychological recovery, as well as mental health approaches, interventions, and services for these victims.

Recently, increasing attention has been given to the mental health needs of disaster and emergency service workers. Such workers face unprecedented personal demands in meeting the needs of victims under stressful and chaotic conditions, with fatigue, stress reactions, and burnout sometimes resulting.

Historically, collaboration between mental health and emergency services professionals has occurred infrequently. Emergency service organizations, such as police and fire departments, and human service organizations such as mental health agencies have been on different tracks, with little overlap in worker roles, responsibilities, or training. Recently, mental health/emergency service collaboration has developed around adult and child protective services, criminal justice diversion programs, emergency medical services, services to crime victims, and disaster relief services. Mental health professionals have become increasingly involved in serving victims of emergencies and disasters, while both mental health and emergency services have increased their sophistication and skill in all aspects of disaster response and recovery. Thus, out of disaster has come a fertile field for cooperation and mutual assistance among these organizations.

From an *emergency services* point of view, the potential benefits of collaboration with mental health agencies include the following:

- Workers can receive training to improve their skills and confidence in dealing with the emotional needs of victims of emergencies.

- Workers and supervisors can learn to recognize the stresses inherent in their work and to develop preventive strategies for mitigating those stresses.

- Workers and supervisors can learn to recognize signs and symptoms of stress when they occur and develop approaches and tools for managing such stress.

- Emergency workers can learn about resources available to them in dealing with disaster-related stress (debriefing, counseling, etc.).

- The use of both prevention and treatment strategies can potentially decrease or eliminate negative effects of stress such as decline in job performance, burnout, high turnover rate, health problems, and family problems for workers.

From a *mental health* point of view, collaboration with emergency services provides the following potential benefits:

- Mental health staff can increase their access to victims of disaster, at the scene or afterward, and provide information, referral, and early intervention.

- By providing training and consultation to emergency workers about emotional needs of victims, mental health staff can be assured of emergency workers' early identification and appropriate referral of victims in need of service.

- Mental health staff can assist emergency workers in preventing, identifying, and dealing with the stresses inherent in their high-risk occupations.

- Such collaboration is an opportunity to destigmatize mental health intervention.

Barriers to Collaboration

Despite the potential benefits of mental health and emergency services collaboration, barriers to such collaboration still exist. From an *emergency services* point of view, workers' use of mental health resources may be inhibited by the following:

- Lack of knowledge about the field and practice of mental health

- Negative mythology about mental health

- Association of "crazy" with mental health; fear of stigmatization in using mental health services
- High professional standards and high self-expectations as rescuers and helpers
- Reluctance or discomfort in discussing feelings, especially those that might connote weakness or reflect doubt about one's performance
- The need to deny and suppress feelings during emergency operations in order to function; discomfort in discussing these feelings when they later emerge
- The "macho" ethic
- The need to be in control in dangerous or frightening situations
- Concerns about confidentiality
- Concerns that use of mental health services will reflect negatively on job performance evaluations, opportunities for promotion, etc.

Mental health staff collaboration with emergency services may be hampered by the following:

- Lack of training in emergency medicine, first aid, etc.
- Intimidation by emergency service uniforms, protective clothing, and special equipment such as vehicles, sirens, and radios.
- Uncertainty about their newly emerging roles and responsibilities during or after emergency or disaster operations
- Discomfort in approaching emergency organizations with their well-defined command structures, officers, technical vocabulary, and the like
- Concerns about initiating contact or offering assistance to an organization that is skeptical about mental health services
- Lack of support from their administrative or service structures, due to the newness of such roles for mental health agencies and/or pressure to provide billable services

It is important for both mental health and emergency service professionals to examine and work through these barriers, separately and together, in order to reap the benefits of collaboration. Discussion, along with education and cross-training about each others' roles, can help to demystify the unknown and open doors of communication and cooperation.

Developing Collaboration

Ideally, working relationships between mental health agencies and emergency services should be established *pre*disaster. Such collaboration should clearly exist between *organizations*, not between specific individuals. The administrations as well as advisory boards or councils should be involved in supporting and directing the collaboration. Working relationships and related policies and procedures should be documented in writing whenever possible. Agreements should be made by individuals at comparable levels in the organization (e.g., between the mental health director and the chief of police).

When such preplanning has not occurred, however, it is still possible and highly desirable for organizations to work together during or following a disaster to address the needs of both victims and workers. This section suggests some approaches to building these collaborative relationships before, during, and after a disaster.

Predisaster

Mental health professionals may initiate collaboration by using the following approaches:

- Initiate a general discussion with the emergency or disaster agency regarding areas of mutual interest and concern. Discussion should take place between staff at comparable organizational levels, and topics may revolve around daily responsibilities and operations or may focus on disaster.

- Mutually review mental health and emergency service disaster plans to ensure that policies and procedures do not conflict and that mutual expectations are clear and appropriate.

- Review and augment the mental health aspects of emergency organizations' disaster plans.

- Provide case-oriented consultations regarding victim needs.

- Provide program-oriented consultation regarding systems being developed to meet victims' needs (e.g., protocol or procedure regarding approaches to victims of rape, crime, disaster, or fires).

- Provide training on how to work with people with emotional problems, such as disaster victims—communication, community and mental health resources, etc.

- Provide training about the mental health aspects of various emergencies, such as dealing with trauma victims and their families' needs, dealing with the suicidal person, family violence and child abuse, and alcohol and drug abuse.

- Provide training on the mental health aspects of disaster response and recovery, including such topics as the emotional and psychological reactions of victims, phases of disaster recovery, approaches that can be helpful in working with victims, and referral of victims to appropriate resources.

- Instruct disaster workers in the range of their responses to disaster.

- Teach mental health agency protocols, operating procedures, and disaster plans. (Such training may include on-the-job experience, such as police officers working a shift at the mental health crisis unit in order to understand policies and procedures.)

- Participate in all disaster drills and critiques as an integral part of the multidisciplinary, multiagency response.

Emergency services may initiate collaboration by using the following approaches:

- Initiate a general discussion with the local mental health agency regarding areas of mutual interest and concern.

- Review and augment mental health employee safety plans for such events as fire, hurricane, and tornado.

- Provide consultation to mental health staff on mitigation of structural or nonstructural hazards within their offices.

- Review the mental health disaster response plan to ensure that policies and procedures do not conflict with those of emergency services and that mutual expectations are clear and appropriate.

- Teach the emergency agency's protocols, operating procedures, and disaster plans. (Such training may include on-the-job experience, such as making ambulance runs with paramedics or making home visits to fire victims with Red Cross caseworkers).

- Invite mental health participation in disaster drills.
- Have appropriate agencies train mental health staff in emergency skills.
  - Red Cross or Emergency Medical Services staff can offer first aid or CPR training.
  - Police departments can offer self-defense classes.
  - Federal Emergency Management Agency (FEMA) staff can teach about disaster aid programs available to victims.
  - Red Cross can provide training in shelter management or emergency assistance to families to give mental health staff specific disaster roles that will provide access to victims in time of disaster.

During Disaster

The type of disaster and the nature of the emergency response affect collaboration of mental health and emergency services if no plan is established predisaster. For example, in a mass casualty situation, with multiple injuries, hazardous situations, limited entry to the area, etc., it would be difficult and usually inappropriate for mental health staff to attempt to assist unless requested to do so by one of the responding organizations. Onsite intervention by a mental health consultant who is not part of the responding organization *must* have the sanction of the incident commander or it will interfere with the work in progress and will in all likelihood increase the stress experienced by workers.

Mental health agencies may initiate collaboration by using the following approaches:

- Contact the incident commander (predisaster training will have taught mental health staff how to identify the incident commander; in the absence of pretraining, ask who is in charge at the scene). Identify self and role. Ask or suggest ways to be of assistance to victims and workers. Follow orders and stay out of hazardous situations.
- Locate the Red Cross, which may be providing food, clothing, or shelter to displaced victims, or coffee and food to victims and emergency workers.
- Introduce self to Red Cross worker in charge at the disaster services vehicle, canteen truck, or shelter.

- Offer identification. Clearly and simply state how you can be of assistance and how your skills can be drawn upon if needed. For example, suggest that the worker in charge point out any victims whose emotional reactions are cause for concern.

- Assist in whatever work needs to be done in the setting, maximizing contact with victims and workers. For example, register victims as they enter the shelter, serve coffee, assist with child care or recreation activities, circulate with and comfort victims.

- Offer support and consultation to managers and workers regarding their own reactions, fatigue levels, and the like.

- Identify victims and workers who may need followup.

Emergency service or disaster organizations may initiate collaboration by using the following approaches:

- Contact the local mental health director. Make requests for assistance as clear as possible: assistance with distraught victims, support for families identifying bodies at the morgue, etc.

- Have an emergency services worker meet arriving mental health workers and brief them on the situation and the problems needing their help. Provide brief orientation on the scenario, command structure, hazardous situations, and so forth.

Postdisaster

Frequently, mental health and emergency or disaster relief agencies begin to work together in the days or weeks following a disaster. Such collaboration usually begins with the focus on providing mental health assistance for victims and may later evolve into consultation and intervention for workers.

Mental health agencies may initiate collaboration by using the following approaches:

- Contact all agencies working with victims: Red Cross, FEMA, relief agencies operating in disaster assistance centers (temporary housing, unemployment, small business association, and so forth), fire departments, police departments, public works, utility companies, voluntary organizations, etc.

- Explain how mental health staff may assist in working with victims. Be aware of negative stereotypes of mental health and focus on stress, crisis intervention, and assisting victims with problems of readjustment and recovery.

- Use the terms "crisis counselor" or "crisis worker," which may be more acceptable and less threatening than "mental health worker" or "psychologist."

- Provide workers with information and handouts about normal stress reactions in victims and interventions that can be helpful.

- Ask workers if they are particularly concerned about individual victims or citizens, and offer consultation, support, or assistance.

- Offer to make home visits or meet with clients to assist workers in making assessments and interventions.

- Provide information and consultation on when and how to refer someone to mental health. Provide information on how mental health staff will work with a person once a referral is made. Provide information on fees and confidentiality.

- Discuss with emergency staff how things are going for the workers: stresses, coping, health, and fatigue.

- Provide information and consultation on common worker stress reactions and approaches that can be helpful.

- Suggest to workers the importance of debriefings in relieving stress and preventing long-term problems, and offer to conduct debriefings for workers.

- As role models, pay attention to own stress reactions, needs, and interventions such as debriefing.

Emergency services may initiate collaboration by using the following approaches:

- Contact the local mental health director and request assistance. Suggest a meeting between key mental health and emergency or disaster relief personnel to map out a plan of action.

- Outline specific assistance that would be helpful, e.g., training for disaster workers on victim response to disaster; brochures on reactions to disaster and things that can be helpful; mental health assistance in making home visits and assessing victims;

training on disaster worker responses to disaster; and debriefings for workers.

- Provide cross-training to mental health workers regarding the emergency service organization's policies and procedures, so that they can collaborate effectively.

To ensure the most effective disaster response, collaboration between mental health and emergency service organizations should be initiated predisaster. However, the above suggestions may help these organizations initiate a working relationship during or after a disaster and develop an excellent ongoing, effective collaboration.

Section 2

Understanding Stress in Disaster Work

Introduction

This section provides an overview of stress, focusing specifically on disaster-related stresses for workers. More detailed information on stress management techniques and ways that workers can prevent and eliminate stress are discussed later in the manual. [In a course setting, introductions and "mood setting" are desirable at this point. See Activities 2-1 and 2-2 at the end of this section.]

The Stress Response

Stress, stressor, and *strain* are often used interchangeably. In this text, however, each has a particular meaning. The *stressor* is the actual event that produces a demand (*stress*) on the person. The resulting wear and tear on the person is called *strain*, as diagrammed here (Mitchell and Resnik 1981).

Stressor (event) ⟶	Stress ⟶	Strain
Call for adaptation	Psychological and physiological response of the person	Wear and tear on the person

Stressors

Stressors may fall into some of the following categories (Charlesworth and Nathan 1984). Note that some stressors are positive events.

- *Cognitive stressors*: how you interpret events; what you "say to yourself" about them
- *Social stressors*: interactions with other people, such as asking for a date, expressing anger
- *Family stressors*: marriage, birth of a child, divorce

- *Work stressors*: hours, responsibilities, commute
- *Transitional stressors*: leaving a job, moving, starting a new job or relationship
- *Environmental stressors*: excessive smoke, heat, cold, noise, rain, sun
- *Chemical stressors*: caffeine, alcohol, nicotine, food additives, toxic fumes
- *Physical stressors*: poor diet, physical overextending, disease, pain, conditions such as pregnancy

Positive Effects of Stress

Some stressors are generally considered to be positive events, so that the effects of stress are not all bad. The positive effects of stress include:

- change
- progress
- creativity, invention
- growth
- survival
- increased energy and endurance

Selye's General Adaptation Syndrome

In the late 1930s, Hans Selye performed research in the field of stress that led to the current knowledge of physiological and psychological stress reactions. These reactions are similar for all forms of animal life. The physiological reactions are the same whether the stressor produces fear, anger, or anxiety (Mitchell and Resnik 1981). For this reason, these reactions are called the General Adaptation Syndrome. It prepares the body for "fight or flight." [See Activities 2-3 and 2-4.]

Long-Term Effects of Stress

Selye pointed out that if stressors did not diminish over a certain period of time, the organism would move from a state of alarm into a state of exhaustion. In this situation, the strain, wear, and tear on the person could have the following health effects (Mitchell and Resnik 1981; Davis et al. 1982; Charlesworth and Nathan 1984):

- Decrease in the effectiveness of the body's immune system, with an increase in colds, flu, and other communicable diseases

- High blood pressure
- Headaches
- Gastrointestinal upsets, diarrhea, ulcers, colitis
- Muscle tension, strains, backaches, and back injuries
- Increased problems with allergies, skin conditions, asthma
- Arthritis
- Possibly increased vulnerability to heart disease, diabetes, cancer
- Weight loss or gain
- Sleep problems
- Increase in use of alcohol, tobacco, and other drugs
- Psychological difficulties: depression, withdrawal, apathy; or anger, irritability, hyperexcitability
- Relationship problems
- Sexual problems
- Work problems

Burnout is an effect of long-term stress. It shows up most commonly in an individual's work performance. Farberow and Gordon (NIMH 1978) define burnout as *a state of exhaustion, irritability, and fatigue which markedly decreases an individual's effectiveness and capability.* [See Activity 2-5.]

Factors Affecting Stress Among Disaster Workers

Various factors may influence a disaster worker's response to disaster. These factors may strengthen and support the worker, serving to *mitigate* or soften the emotional consequences of disaster, or they may put the worker *at risk* for stress reactions.

A. *Factors related to the individual*

1. *Health*. Poor health may place one at risk.
2. *Preexisting stresses*. Recent job change, move, family problems, divorce, etc., may place an individual at risk.

3. *Previous traumatic experiences.* Successful outcomes may have helped individuals develop coping and survival skills and strengths. Unsuccessful outcomes or emotional reactions that have not been worked through may leave individuals vulnerable to strong emotional reactions.

4. *Coping skills.* A repertoire of effective coping skills can reduce risk.

5. *Prior disaster experience.* Cumulative stress from prior rescues may leave one at risk if feelings have not been worked through. On the positive side, cumulative experience may season workers and desensitize them to traumatic stimuli.

6. *Identity and self-expectations.* High self-expectations as a helper and rescuer can put workers at risk for a sense of failure and lowered self-esteem if rescue efforts are unsuccessful.

7. *Perception and interpretation of the event.* A worker's perception that an incident could have been prevented, for example, will likely result in strong feelings of anger or bitterness in the worker.

B. *Interpersonal factors*

1. *Strength of social support system.* Family, friends, coworkers, and others constitute support that can affect worker risk.

2. *Preexisting stresses in relationships.* Marital problems and family difficulties may place an individual at risk.

3. *Expectations and needs of others.* Family members needing care, such as children at home alone or relatives with health problems or disabilities, may add to a worker's stress.

4. *Status of family members in disaster.* If family members are separated at the time of disaster and the worker is unsure of their well-being, or if the family falls victim to the disaster, the worker suffers additional stress and role conflict.

C. *Community factors*

1. *Size of community.* In small communities, where victims and workers know each other, workers may experience higher self-expectations about their helping. Public expectations may also be higher, with citizens wanting special consideration or treatment, thus increasing stress and conflict for workers.

2. *Previous degree of social solidarity*. Communities that were cohesive and supportive of its members predisaster recover more quickly and its workers experience less stress than communities with a high degree of social conflict.

3. *Prior disaster experience*. Communities that have been through a similar experience often adapt and function more quickly, with workers and community members working more easily and cooperatively together than the first time.

4. *Amount of social disruption due to disaster*. The greater the damage to roads, communications, hospitals, public utilities, supply lines, and normal community services, the more stress exists for victims and workers alike.

D. *General aspects of the disaster or type of event*

1. *Warning*. With sufficient warning, individuals can prepare for a situation both physically and psychologically, and traumatic effects can be minimized. A disaster that strikes without warning produces the maximum social and psychological disruption.

2. *Contrast of scene*. A disaster occurring suddenly, without warning, can cause an abrupt change of reality that is difficult to comprehend, for example, a car jumping the curb and mowing down pedestrians on a street that was quiet and peaceful. The sharp and sudden contrast makes the disaster all the more horrifying.

3. *Type of disaster*. Technological disasters are often more stressful for victims and workers than natural disasters because of the feeling that they should have been prevented. Feelings of anger and blame are often difficult to work through and may increase rather than decrease over time.

4. *Nature of the destructive agent*. If the cause of the disaster is clearly perceived and well known (such as a river that floods every year), it is less psychologically disturbing than an agent that is invisible and whose effects are unknown or delayed (such as chemicals or radiation).

5. *Degree of uncertainty*. Those disasters with a high degree of uncertainty regarding recurrence, additional damages, or outcome of rescue attempts are more traumatic than disasters with fairly predictable outcomes.

6. *Time of occurrence*. Disasters occurring at night are reported to be more psychologically disturbing than those occurring

during the day. This may be due to the inability to orient oneself to the scope and danger of the situation in the darkness.

7. *Duration of disaster or continued threat*. If the duration of the disaster is short, psychological reactions tend to be less intense and briefer than if individuals are subjected to prolonged or intermittent stress.

8. *Scope of disaster*. The more injuries, deaths, and damage, the greater the intensity of psychological impact. Also, the broader the scope of the disaster, the greater the likelihood that it will involve both work and family, thus increasing the level of stress for the workers involved.

9. *Location of disaster*. If the disaster affects the worker's home community or neighborhood, the potential stress over the status of family and friends is great. If, on the other hand, a worker is sent to a disaster in a distant community (as with Red Cross or FEMA workers), the worker experiences the stress of separation from family and support systems.

Sources of Stress for Disaster Workers

Disaster workers are subject to three main sources of stress in their work, one arising out of the disaster event itself, such as gruesome sights, one from different aspects of the job, such as time pressures, and the third from organizational pressures.

Event Stressors

At least three distinct types of event stressors have been identified:

- Personal loss or injury
- Traumatic stimuli
- Mission failure or human error

The following list of characteristics and stressors of disaster are weighty contributors to the stress reactions of individuals and concern the worker's particular experience in the event.

A. Personal loss or injury

- A worker is exposed to toxic substances on the job.

- A team member is injured or dies

B. Traumatic stimuli

- The rescuer identifies strongly with the victim, as in the case of the death of a child the same age as one's own.
- Loss of life follows extraordinary and prolonged expenditures of energy in the rescue effort.
- A baby, child, or someone with "everything to live for" dies.
- The worker knows the victim or family members.
- Circumstances are unusual or sights, sounds, or activities are distressing, such as recovery efforts following an airplane crash where there are no survivors and body parts must be collected.
- A situation presents serious physical or psychological threats to a worker, such as a hostage situation.

C. Mission failure or human error

- A situation seemingly could have been prevented.
- A civilian is injured or dies from emergency service operations, such as in a collision with an emergency vehicle.
- No opportunity exists for effective action, such as an incident where there are no survivors.
- A situation attracts an unusual amount of attention from the news media; audio recordings and videotapes of disaster operations are subject to the scrutiny of public officials as well as the general public, and workers may feel they are portrayed unfairly as heroes or as failures. [See Activity 2-6.]

Occupational Stressors

The following outline presents those stressors arising from the nature of disaster work.

A. *Pressures*. Disaster work involves weighty professional responsibilities in which the stakes are high, often involving life or death. Public as well as self-expectations for workers are high. The emergency response is immediate, continuous, and often without letup. Pressures may include:

1. *Time pressures*. Especially in rescue and emergency medical situations in which a time limit exists on the victim's chance for survival, time pressures may be great.

2. *Work overload.* Overload may involve both the quantity and difficulty of tasks to be accomplished.

3. *Responsibility overload.* Especially for those with supervisory or command responsibility, a multitude of tasks, all with high priority, may need to be done simultaneously with no one to whom they can be delegated.

B. *Demands on workers*

1. *Physical demands.* Work may require physical exertion, strength, stamina, and endurance where hours are long and work conditions adverse.

2. *Mental demands.* Work requires good judgment, clarity of thinking, and the ability to make accurate calculations, set priorities, and make decisions in chaotic situations.

3. *Emotional demands.* Workers are exposed to traumatic stimuli and victims under stress. They must keep their emotions under control in order to function. They must make painful, life-or-death decisions and work in the presence of anger or fear.

C. *Physical properties of the work environment*

1. *Work area.* This can be low-pressure, such as a staging area, versus high-pressure, such as a triage area or morgue.

2. *Amount of contact with victims, injured, dead, and dying*

3. *Weather.* Workers may be exposed to heat, sunburn, cold, frostbite, rain, and other types of environmental stresses.

4. *Hazards.* Workers may be exposed to wounds and burns; toxic chemicals and fumes; insect, animal, and snake bites; skin irritations such as poison ivy or poison oak; communicable diseases; and accidents.

5. *Work conditions.* Cramped work quarters, noise, and lack of privacy may affront workers.

6. *Living conditions.* In some situations, workers may have uncomfortable living quarters, poor sleeping accommodations, poor food, lack of water for bathing and sanitation, and lack of privacy.

7. *Human resources.* Human resources may be lacking. Conversely, problems of coordination and deployment may result

from an oversupply of well-meaning but untrained volunteers and/or an overresponse of rescue units and equipment.

8. *Frustrations*. Supplies and equipment may be lacking or oversupplied. Transportation problems may result in immobilization and isolation. Equipment may break down or be nonfunctional without electricity. Communication systems may break down or be overloaded.

9. *Bystanders*. The presence of bystanders, especially in large numbers, can be an unwelcome factor in the worker's attempt to manage an incident.

Organizational Stressors

The following list enumerates those stressors arising from the nature of the emergency organization.

A. *Professional vs. volunteer organization*. In some volunteer organizations, such as fire departments, less regular training and fewer drills may take place compared to professional departments. Workers may not be as regularly exposed to certain types of incidents and may not be as emotionally desensitized. In rural communities, which usually rely on volunteer fire and rescue units, workers frequently know their victims and families. In addition, little anonymity exists: Everyone knows the worker and details of the incident.

B. *Day-to-day vs. disaster responsibilities*. Some organizations, such as police, fire departments, and the Red Cross, have emergency tasks as part of their ongoing organizational responsibilities. Certain expectations about emergency behavior are built into their roles, and they have skill and experience in setting priorities and screening nonessential activities. Other groups, such as human service organizations, are required to take on emergency responsibilities *only* in times of disaster. These responsibilities may not be clearly understood by staff and may result in anxiety and stress during a disaster.

Even within emergency organizations, changing roles during disasters can cause discomfort or stress for workers. For example, in nonemergency times, 80-90 percent of police work is spent in "helping" roles, as opposed to those of "enforcement" (Bard 1976). In times of disaster, police tasks usually entail those that symbolize authority, such as traffic and crowd control, protection of life and property, and warning and evacuation (Kennedy 1970). In one police department debriefing following a disaster, officers reported their most difficult job to be maintaining roadblocks, at which victims presented heart-rending, legitimate reasons for wanting to get through the obstacles. Despite their confidence in the necessity for maintaining the roadblocks, these officers were highly stressed at being the "bad guys" in the eyes of the public with whom they usually enjoyed a very positive relationship (Garaventa 1984).

Some organizations struggle to maintain their boundaries in disaster against the expectation or demands of community officials and other disaster organizations. For example, fire officials generally resist long-term involvement in non-fire-related disasters in order to keep their organizations intact and ready to meet those demands associated with their regular functioning (Warheit 1970).

C. *Role clarity and role conflict*: The factors discussed above affect *role clarity*. Role ambiguity and role discomfort will likely be experienced by workers who are unsure of their responsibilities or uncomfortable with their tasks in time of disaster. For example, administrators may be required to become practitioners and vice versa. Clear job descriptions, disaster plans, training, and frequent drills will increase role clarity and role comfort for workers.

Role conflict occurs when a worker must face competing or contradictory demands from personnel, the public, or himself. For example, firefighters may have to damage a victim's personal property, over the protests of the victim, in order to control the fire. Media personnel report conflict between their occupational role of reporting the disaster and wanting to assist. Personnel report conflict between their roles as supervisors and colleagues. Workers often report feelings of conflict between their work and family responsibilities. Emergency workers do, in fact, perform their required duties without apparent negative consequences of role conflict. Later, however, they often report feeling "torn" between conflicting loyalties and demands of job, family, and community, with resulting feelings of guilt, inadequacy, or failure (Garaventa 1984).

D. *Size of the organization*: Size of the personnel pool available will affect the amount of stress workers feel. In times of emergency, some tasks become irrelevant, thus freeing manpower for priority activities. However, the work load may increase dramatically. Volunteers may become available but may need to be trained, thus increasing organization tasks. Workers may simply have more to do than they humanly can, leading to tremendous feelings of conflict and guilt when workers need a break or time off from the operation (Garaventa 1984).

E. *Rank of the individual in the organization*: The higher the rank of the individual in the organization, the greater the possibility for role conflict and stress due to larger task systems and an inability to delegate responsibilities (Kahn et al. 1964; Schein 1965).

F. *Chain of command*: "Who's in charge, here?" is a frequently listed source of stress for workers. A multitude of response agencies, some of whom have never worked together before, may cause confusion as to who is the incident commander or overall supervisor. Layers of authority occur as response escalates from the local to State to Federal level. An influx of officers and supervisors may result not only in confusion, but also in a feeling of oversupervision. The stress is accentuated when, after the fact, supervisors scrutinize and critique videotapes of the incident.

G. *Organizational conflict*: Conflict may occur *within* the organization. For example, organizations may be required to operate according to standard procedures, while at the same time being faced with the need to adapt to unusual circumstances. Conflict may also occur *between* organizations, as in the case of groups who have never worked together who need to negotiate roles and responsibilities. Conflict between organizations may occur over allocation of resources, authority, responsibility, or blame.

H. *Rewards*: *Low rewards* in the form of low pay, low prestige, or lack of recognition are sources of stress for workers. Many emergency response organizations are not particularly well-paying, despite work that may be at times life threatening and responsibilities that may entail life-and-death decisions.

Positive rewards include recognition, commendations, and a feeling of gratification in having saved lives or provided tangible goods to people in need. The organization can support its workers by providing ongoing training and education, certification, and promotion. Psychological and emotional supports include effective supervision, debriefing following critical incidents, and followup services such as counseling.

Supplementary Materials

Audiovisual Materials

The following videotape is recommended for further understanding of the stress process (guidelines for use and discussion are included in the appendix): "Managing Stress, Part I: The Time Bomb Within."

Recommended Readings

Charlesworth, E.A., and Nathan, R.G. Learning about stress and your life. In: *Stress Management: A Comprehensive Guide to Wellness*. New York: Atheneum, 1984.

Cohen, R.E., and Ahearn, F.L., Jr. *Handbook for the Mental Health Care of Disaster Victims*. Baltimore and London: The Johns Hopkins University Press, 1980.

Mitchell, J.T., and Resnik, H.L.P. Understanding crisis. In: *Emergency Response to Crisis*. Bowie, MD: Robert J. Brady Co., 1981.

Activities

Activity 2-1

Time required: 10-20 minutes, depending on size of group.

Have participants introduce themselves to the group, stating their current jobs and, briefly, their experience in disaster. A participant's experience may have been as a victim, a member of a community that was struck by a disaster, or as a worker. Keep these introductions brief; there will be opportunity for more discussion later.

Activity 2-2

Time required: variable, depending on length of audiovisual presentation.
Materials required: film, slides, or videotape; projection equipment.

Explain to the class that a film (or slides or video) will now be shown to set the mood and to make disaster become more real. Ask participants to allow themselves to identify with victims or workers in the film and to imagine themselves being there. Let participants know that this activity will evoke both thoughts and feelings in them, and that there will be ample time for discussion after the film.

Show the Red Cross film, "Disaster Sights and Sounds." If this film is not available, obtain a film, videotape, or slides from your local Red Cross chapter, Office of Emergency Services, or police or fire department. The film should have footage of actual disasters, showing both victims and disaster workers. It is *not* recommended that you use segments of commercial feature films on disaster, as such films often contain inaccurate portrayals of human behavior in disasters. Such disaster films often perpetuate commonly held misconceptions or myths about human behavior in disasters.

Follow the suggestions listed in the appendix for use of the film "Disaster Sights and Sounds." The discussion questions can be used for any audiovisual tool you use.

Activity 2-3

Time required: 10 minutes.
Materials required: newsprint and felt-tipped pens, or blackboard and chalk.

Write the following physiological reactions on newsprint or on the blackboard. Ask participants to describe the adaptive purpose of each of the physiological responses (i.e., why they occur).

- *Blood pressure and pulse rates increase*

  [Sample response: respirations increase and deepen to increase oxygen in the blood and force it to the areas of the body needing it]

- *Blood sugar level increases*

  [Provides energy, strength, endurance for necessary physical activity]

- *Blood drains from extremities and flows to the brain and muscles*

  [Increases alertness and strength]

- *Muscle tone increases*

  [Prepares for action]

- *Pupils dilate*

  [Improves vision]

- *Blood clotting is enhanced*

  [Decreases blood loss if injury occurs]

- *Perspiration increases*

  [Cools body during strenuous activity]

Activity 2–4

Time required: 5 minutes.

Have participants share some of their own reactions to stress that are general adaptation responses. Examples might include:

- Heart pounding, breathing hard, trying to catch your breath
- Cold hands and feet
- Tremors and shaking
- Muscle soreness or stiff neck after a difficult day
- Sweaty hands; need to use more deodorant on a stressful day
- Surprising strength or endurance in an emergency

Activity 2–5

Time required: 5 minutes.
Materials required: newsprint and felt-tipped pens, or blackboard and chalk.

Have participants name symptoms of burnout familiar to them. Write them on newsprint or blackboard. Symptoms might include the following (NIMH 1978; Cohen and Ahearn 1980; Mitchell and Resnik 1981):

- Changed feelings about oneself: lowered self–confidence, self–esteem
- Boredom with the job
- Feeling overwhelmed
- Decreased sense of purpose, accomplishment, or capability on the job; low morale
- Tardiness, absenteeism
- Impatience with clients or victims
- Ambivalence about seeing another client or victim
- Constant tension

- Constant fatigue; exhaustion
- Apathy, depression
- Vague anxiety
- Excessive irritability; outbursts of anger
- Overreaction to emotional stimuli
- Withdrawal from social contact
- Accident proneness
- Suicidal thoughts

Activity 2-6

Time required: 5 to 10 minutes.

Using their own experience, have participants add to the list of event stressors affecting emergency workers' emotional response to disaster.

Section 3

Effects of Stress on Disaster Workers

Introduction

This section discusses the *effects* of stress on disaster workers. It covers common stress reactions, when these reactions may occur, how they may manifest themselves, and how a worker can assess if they are normal or excessive.

To place disaster stress reactions in the proper framework and perspective, it is important to emphasize two concepts.

1. *NO ONE WHO SEES A DISASTER IS UNTOUCHED BY IT*

A disaster is an awesome event. Simply *seeing* massive destruction and terrible sights evokes deep feelings. Often, residents of disaster-stricken communities report disturbing feelings of grief, sadness, anxiety, and anger, even when they are not themselves victims of the disaster. Such strong reactions confuse them when, after all, they were spared any personal loss. These individuals are comforted and reassured when they are told that their reactions are normal in every way; everyone who *sees* a disaster is, in some sense, a victim. This is true for workers as well as community residents.

When individuals sustain tragic losses, it is not unusual for neighbors and workers alike to identify with what they are going through, to imagine themselves in the victim's place. The loss of a home, for example, may also represent the loss of life savings, family history, and a place of safety and security.

The emotional impact of disaster is especially strong if contact with victims is prolonged. The intensity of the emotional climate of disaster demands that the worker continually confront and manage all kinds of painful expressions of emotion (Cohen and Ahearn 1980). Both the subtlety and intensity of workers' reactions is reflected in sociologist Kai Erikson's (1977) reaction to Buffalo Creek when he first entered the community a year after a major, devastating flood:

> I felt for a moment as though I were in the company of people so wounded in spirit that they almost constituted a different culture . . . the sense of being in the presence of deep and

> numbing pain remained an important part of the emotional climate in which this study was done. I was driving down Buffalo Creek late that night when the storm that had been threatening all day finally broke with mountain vengeance. I pulled over to the side of the road near one of the several trailer camps on the creek and stayed there as half the lights in the camp flashed on, children began to cry, and small groups of men trudged out into the darkness to begin a wet vigil over the stream. Something of the mood of that camp reached across the creek to where I was parked, and I had to fight off a compelling urge to drive away, to escape. I had been in the hollow for only twelve hours.

Seeing homes, community, and the physical environment destroyed by a disaster leaves a tremendous sense of vulnerability. Such sights can profoundly affect one's sense of control, security, safety, and well-being. Charles Kurault (1982), in reporting the effects of the massive mudslides that destroyed homes and caused multiple deaths in Santa Cruz County, California, summarized it this way:

> Once you have seen this, something changes inside. Once you have absorbed what nature and the forest can do; once you have seen the majestic, glorious redwoods turned into bludgeons and the good earth stirred into soup; once you have seen the forest kill itself and the people in this way; once you have seen all this, you will never walk in the forest the same way again.

Disaster and emergency workers are affected by traumatic events irrespective of rank or years of experience. From the line worker to the highest ranking officer; at the local, State, or Federal level; newly trained or with years on the job--all experience very human reactions to human events.

This is not to say that workers are overcome with grief or stress in every disaster in which they work. Workers become seasoned, experienced, and, to some extent, desensitized. However, after any disaster, when asked "What affected you most?", a worker will usually have a deeply moving answer.

2. *DISASTER STRESS REACTIONS ARE A NORMAL RESPONSE TO AN ABNORMAL SITUATION*

Disaster workers are normal persons who generally function quite well under the responsibilities, hazards, and stresses of their jobs. At times, when workers have been subjected to severe or prolonged stress in a disaster or traumatic situation, they may show signs of emotional and psychological strain. These reactions are *normal* reactions to extraordinary and abnormal situations and are to be expected under the circumstances. They can be experienced by victims, other community residents, and workers alike. These reactions are usually transitory in nature and rarely imply a serious mental disturbance or mental illness. Relief from stress and the passage of time usually lead to the reestablishment of equilibrium, but information about normal reactions, education about ways to handle them, and early attention to symptoms can speed recovery and prevent long-term problems.

Disaster Worker Phases

Emergency and disaster workers go through a series of emotional phases related to the nature of their jobs (Graham, unpublished paper). Victims also go through their own set of phases. At times, workers may feel "out of sync" with the emotional reactions of victims. For example, victims may be starting to feel grief, sadness, and loss, while workers are still energetically and heroically working at their jobs. Or disaster workers may closely identify with the victims and experience their emotions vicariously. Sometimes, of course, disaster workers are themselves victims. While it is thus impossible to specify exactly what a given worker will experience at any one point in time, the normal worker phases are as follows.

Alarm Phase. This phase involves comprehending and adjusting to the news of the disaster—collecting and making sense of whatever facts and information are available. Workers, like victims, may initially feel shocked and stunned. Workers newly entering a disaster area can be briefed via radio communications or on the scene to help them prepare for and adjust to what they will find. [See Activity 3-1.]

Mobilization Phase. Workers quickly recover from their initial shock and start developing and coordinating plans. Supplies, equipment, and manpower are quickly inventoried. Mutual assistance may be requested. Staff move into action.

Action Phase. Workers actively and constructively work at necessary tasks. A high level of activity and often a high level of stress occur. Numerous frustrations may also occur due to adverse conditions, lack of equipment, communication breakdowns, and the like. Nevertheless, workers proceed diligently and often heroically, frequently ignoring their own fatigue and injuries. On disaster operations of long duration, worker burnout can occur if needs for breaks, food, and sleep are ignored. [See Activities 3-2 and 3-3.]

Letdown Phase. This phase involves the transition from the disaster operation back into the normal routine of work and family life. It is often the most intense period of emotion for workers. The feelings that were repressed, denied, or put on hold during the action phase now surface. In addition, workers may experience feelings of loss as they move out of the disaster mode of work. For many, a return to business as usual, with work piled up and the office in disarray, can, indeed, be a letdown. [See Activities 3–4 and 3–5.]

Stress Responses During Disasters

In describing the common stress reactions experienced by workers during a disaster or critical incident, the word symptom is used here to refer to specific stress reactions. In medical terminology, symptom refers to an abnormal condition, usually indicating disease, but in this text, it is used synonymously with reaction or response and does not imply abnormality or disease. In the same vein, the word disorder is avoided in describing these stress responses. Disorder implies illness and pathology, but this discussion concerns normal reactions. These reactions become problematic only if they interfere with workers' ability to perform their jobs or other normal functioning.

Alarm and Mobilization Phases

During these phases, workers react to the alarm, adjust to information about the event, and gear up to respond. In a warning period in which workers are waiting to see whether an event will materialize (a tornado watch, for example), they may experience vague feelings of anxiety, restlessness, and irritability. With no warning period, workers often report strong physiological reactions to the alarm, especially if startled out of a state of relaxation or sleep. The following reactions are frequently reported by workers in these phases:

A. *Physiological*: "fight or flight," General Adaptation Syndrome stress response; increased pulse, respirations, blood pressure, perspiration, etc.

B. *Cognitive*: disorientation, difficulty in making sense of the information coming in, trouble comprehending the scope of the event

C. *Psychological and emotional*: feeling stunned or shocked, especially if in a large-scale event or critical incident; anxiety or fear about what will be found at the scene

D. *Behavioral*: Difficulty communicating, putting thoughts into words; increased levels of activity, decreased efficiency ("running in circles")

Action Phase

This phase may vary in length from several hours to several days or weeks. Some symptoms, such as physiological stress reactions or difficulty thinking clearly, may occur immediately. Other symptoms, such as sleep problems, decreased resistance to disease, depression, and withdrawal from others, may occur after days or weeks on the job and may indicate gradual burnout. The symptom lists that follow are complete and comprehensive. They are provided here to (1) inform participants about what symptoms commonly occur and (2) assist participants in determining if they or their personnel are experiencing potentially dangerous stress levels.

No clearcut guide exists for how and when to know if workers are experiencing excessively high stress levels. One fact is clear: workers are usually not the best judges of their own performance, as they tend to become intensely involved and invested in being part of the operation and do not want to leave the scene or be relieved for a break. A buddy system, where coworkers monitor each others' reactions, may be very helpful.

It is of great importance that supervisors or command officers be sensitive to workers' stress response and level of functioning. Mental health consultation at the scene can help command officers make such assessments. Mental health staff must be well trained in emergency operations, however, to differentiate normal worker stress levels from those that are excessive. Early recognition of severe stress reactions is important. If emergency workers are given short breaks before symptoms become severe, they can often return to action and function quite effectively. If excessive stress reactions continue unabated, workers soon use up most of their energy; they can reach a state of severe exhaustion and no longer be able to cope adequately, so that continued activity at the scene is not likely to be effective. In fact, such workers may become a hazard to themselves, their coworkers, or the people they are trying to help (Mitchell and Resnik 1981).

The following are general guidelines for assessing whether a worker is experiencing potentially excessive stress levels:

- Experiencing a *few* of the listed symptoms generally does not constitute a problem.

- Several symptoms in *each* category may indicate that the worker's functioning is diminishing.

- The supervisor should closely assess the worker's *performance*, paying special attention to *judgment*, *efficiency*, and *effectiveness*.

- The supervisor should pay attention to instinct and gut reactions. Intuition is often fine-tuned to stress reactions that are excessive or problematic.

The following symptoms may occur during the action phase of disaster operations (NIMH 1978; Horowitz et al. 1980; Mitchell and Resnik 1981; Mitchell 1983b; Graham, unpublished paper):

A. *Physical*: Physical symptoms are often the first to occur in *acute* stress reactions. In more chronic stress situations, such as burnout, they may be the last symptoms to appear (Mitchell 1983b).

1. Increased heartbeat, respiration, blood pressure
2. Trouble getting breath (have checked at hospital if accompanied by chest pain)
3. Nausea, upset stomach, diarrhea
4. Sweating or chills; hot or cold spells; clammy skin
5. Tremors, especially of hands, lips, eyes
6. Muffled hearing
7. Headaches
8. Visual focusing (narrowed field of vision to encompass only what worker is working on)
9. Feeling weakness, numbness, or tingling in parts of the body; heavy feeling in arms or legs
10. Feeling uncoordinated
11. Soreness in muscles
12. Lower back pain
13. Feeling a "lump in the throat"
14. Pains in chest (have checked at hospital)
15. Faintness or dizziness
16. Exaggerated startle reaction
17. Fatigue
18. Appetite change

B. *Cognitive*: All cognitive processes usually diminish under stress (Mitchell 1983b). These symptoms are often the next to appear after physical symptoms in an acute stress situation.

1. Memory problems
2. Difficulty naming objects (anomia)
3. Disorientation
4. Slowness of thinking, difficulty comprehending
5. Mental confusion
6. Difficulty calculating
7. Difficulty using logic, making judgments and decisions, problem solving
8. Loss of ability to conceptualize alternatives or prioritize tasks
9. Poor concentration, limited attention span
10. Loss of objectivity

C. *Psychological and emotional*:

1. Feeling high, heroic, invulnerable
2. Feelings of gratefulness for being alive, euphoria
3. Anxiety, fear
4. Strong identification with the victim
5. Anger, blaming
6. Irritability, restlessness, hyperexcitability
7. Sadness, grief, depression, moodiness
8. Recurrent dreams of the event or other traumatic dreams; other sleep problems
9. Guilt; wanting to do more to help
10. Feelings of isolation, detachment, estrangement; feeling lost or abandoned
11. Apathy, diminished interest in usual activities

12. Denial or constriction of feelings; numbness
13. Excessive worry about safety of others

D. *Behavioral*:

1. Inability to express self verbally or in writing; difficulty communicating
2. Hyperactivity
3. Decreased efficiency and effectiveness of activity
4. Outburts of anger; frequent arguments
5. Inability to rest or let down
6. Periods of crying
7. Increased use of alcohol, tobacco, other drugs
8. Social withdrawal, distancing, limiting contacts with others

As the action phase extends over days or weeks, symptoms of gradual burnout may occur, that is, workers may also experience changed attitudes about themselves, such as lowered self-confidence, self-esteem, and sense of accomplishment; and changed attitudes about victims, such as seeing victims as being responsible for their own problems ("they shouldn't have built a house there in the first place") or feeling reluctant to face another victim.

Stress Responses After Disasters

Working in a disaster engages a worker in activities that may be intensely meaningful as well as traumatic. Workers" experiences may be both very positive and very painful. In a disaster of any length (days or weeks), it is not unusual for workers to feel some ambivalence about giving up their disaster roles. At the same time, workers may finish an operation in a state of physical and emotional exhaustion. They may feel tremendous relief that it is over. For many workers, this mixture of relief and sadness can be confusing. It is very helpful for workers to understand the concept of transition and the transformation it entails.

Transition involves four components (Bridges 1980):

1. An *ending*, involving loss and letting go
2. A period of *confusion* and *distress*

3. A period of ***working through*** and making sense of the feelings
4. A new ***beginning***

The first step to understanding what is involved in transition is for workers to understand both the positive and negative aspects of their disaster experience. (After an actual disaster, these should be covered in a debriefing.) [Activity 3–6 is suggested.]

Some of the positive and negative aspects of disasters for workers may include the following:

Positives

- Opportunity to use initiative and creativity
- Opportunity to use leadership potential and skills
- Professional experience, learning, and growth
- Opportunity for collaboration and feelings of teamwork that may be absent in normal routines
- Excitement, stimulation, intensity
- New relationships
- Sense of community
- Sense of importance, identity
- Feelings of helpfulness, effectiveness, accomplishment
- Feeling of having contributed to something important, something that really mattered
- Appreciation from victims and community
- Self-confidence from having faced and survived a dangerous situation
- A sense of courage

Negatives

- Traumatic stimuli
- Identification with victims' loss and pain
- Feelings of inadequacy

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- Frustrations of the job: inadequate supplies, communication breakdowns, etc.
- Confusion regarding chain of command
- Separation from family and friends
- Fatigue and exhaustion

Letdown Phase

The reactions that workers will be experiencing in the letdown phase include those feelings related to the *ending or transition* and those related to the *disaster*.

A. *Reactions related to the transition* might include:

1. Difficulty in letting go; resistance to ending the disaster operation; a desire to keep going in the disaster mode
2. Sadness, depression (related to the losses of some of the positive experiences listed above)
3. A desire to maintain contact with other disaster workers or with victims
4. Feelings of restlessness, inability to get involved with regular work responsibilities
5. Feelings of depression and annoyance at routine work that may have piled up during the disaster
6. Lack of feeling of closure to the disaster experience, especially if no debriefing is provided
7. Anger if no recognition is given for performance in the disaster
8. Feeling of estrangement from peers who were not part of the disaster operation; feeling that they cannot understand what it was like
9. Conflict with workers at the office or station who were not part of the operation and who may feel resentment at not getting the glory, excitement, or overtime while being left with the drudgery of business as usual and an extra work load
10. Feeling of estrangement from family members; feeling that they cannot understand what the worker experienced

11. Conflict with family members who may be angry at the worker's absence during the disaster

B. *Reactions related to the disaster* might include:

1. A feeling of numbness or lack of feeling; after an intensely traumatic disaster, a feeling of shock
2. As shock wears off, feelings of sadness, grief, or anger surfacing for the first time
3. Fear of recurrence of the event; hypervigilance for disaster cues
4. Avoidance of activities or places that arouse recollection of the traumatic event
5. A need to ventilate and repeatedly talk about the experience *or*
6. Withdrawal, denial of feelings, and unwillingness to talk about the experience
7. Two alternating reactions to a *major* traumatic event:
    - intrusion, in which memories or unwelcome thoughts of the disaster occur uninvited, and the sufferer may struggle to control them or drive them from his consciousness
    - avoidance or denial, in which the person is emotionally numb; this is not true peace and calm, but rather an avoidance of reminders, thoughts, and feelings about the event

Timing of Postdisaster Stress Reactions

In review, workers' stress reactions can occur at any time during the alarm, mobilization, action, or letdown phases. A common occurrence *after* disaster is for workers to experience a period of extreme fatigue and/or emotional numbness. This emotional numbness may be a remnant of workers' coping mechanisms during the action phase, in which they had to deny or repress their feelings in order to cope with the situation. They have not yet taken off their suit of armor and let down their defenses.

Some workers may genuinely experience no strong reactions to a disaster, especially if it did not include very traumatic stimuli and if the workers are seasoned and experienced. This is a perfectly normal experience, and workers should not feel uncomfortable if they are not having a stress reaction.

Some workers may have no particular reaction to the disaster until weeks or months later, at which time something may trigger memories and some of the stress symptoms listed earlier. The main characteristics of such a delayed stress reaction include (1) vivid and disturbing dreams of the event, or intrusive mental images, often called flashbacks; and (2) strong fears that the event may occur again (Mitchell, unpublished paper). A debriefing for workers can and should be conducted at any time such reactions surface. Successful debriefings have been conducted as long as 1 or 2 years after a disaster or incident.

How to Know When Stress Reactions Become a Problem

Usually, stress reactions will diminish with the passage of time, the ability to talk about the event and its meaning, and the support of family and friends. Sometimes, the event may have been so traumatic for the worker that the symptoms do not diminish on their own. The following are some guidelines for differentiating normal stress reactions from those that may be problematic:

A. *Duration*: The duration of a stress reaction will depend on the severity of the event, the meaning of the event to the worker, and the strength of the individual's support system. Stress reactions may last a few days, a few weeks, or a few months. Generally speaking, symptoms begin to subside in about 6 weeks to 2 months. Intense symptoms lasting longer than about 6 weeks may require professional assistance.

B. *Intensity*: This is a highly subjective criterion. However, any symptoms that seem acutely intense, disturbing, or out of control to the worker may require professional assistance. In particular, visual or auditory hallucinations or suicidal thoughts should receive mental health assistance.

C. *Level of functioning*: Any symptoms that seriously interfere with an individual's functioning at work or interfere with his/her family life should be considered for referral to mental health assistance.

These reactions do not imply that the individual is crazy or weak. They result from the fact that certain situations can be so traumatic or painful for an individual that professional assistance from a counselor may be necessary (Mitchell, unpublished paper).

Supplementary Materials

Audiovisual Materials

The following videotape is recommended to augment the lecture material (guidelines for use are included in the appendix): "The Hyatt Disaster: The Hidden Victim."

Recommended Readings

Mitchell, J.T., and Resnik, H.L.P. Crisis worker stress and burnout. In: *Emergency Response to Crisis*. Bowie, MD: Robert J. Brady Co., 1981.

Activities

Activity 3-1

Time required: 15 minutes.
Materials required: newsprint and pens.

Have workers discuss their own alarm reactions when an emergency call comes in or when they receive news of a major event or critical incident. Ask such questions as "How did your body respond?" "What thoughts went through your mind?" "What emotions did you feel?" "Did your behavior change in any way (communication skills, activity level, etc.)?" List symptoms on newsprint and save for later use.

Ask participants to discuss the *implications* of these reactions, both positive and negative. Ask, "What are some things that can result from those reactions?" Answers might include:

- Increased adrenalin and energy for upcoming action phase
- Underestimating (because of difficulty with comprehension) or overestimating (because of excitement, anxiety) the scope of response needed
- Inaccurate or incomplete communications
- Inefficiency in getting organized and mobilized

Ask participants to suggest ways to *cope* with these stress reactions so that they do not interfere with functioning. Record suggestions on newsprint. Suggestions might include:

- Take a deep breath, slow down, and think before making a move or a decision.
- Communicate slowly, in concrete, clear terms. Obtain and give information that is as specific as possible.

Activity 3–2

Time required: 15 minutes
Material required: newsprint and pens.

Have workers discuss their own reactions to the action phase of disaster response. Ask them to review the following questions and record their findings on newsprint. Save for later use.

- What reactions have you experienced in the action phase of an emergency?

  (Include physical reactions, thoughts that go through your head, emotions you experience, behavior that seems different from under ordinary circumstances)

- What are some of the *implications* of these reactions? How can they affect your functioning?

- What are some of your ideas about how to *cope* with these reactions so that they do not interfere with functioning?

Activity 3–3

Time required: 15–20 minutes

Ask participants the following questions:

- What do you experience as factors contributing to burnout in your own job and/or organization? Answers often include:

  –Boredom
  –Lack of professional stimulation, training
  –Administrative hassles
  –Poor communication within the organization
  –Lack of input into decisions affecting workers
  –Lack of recognition

- What signs of burnout have you experienced in yourself or your coworkers?

- What approaches do you find helpful?

- What changes in your work setting might help to reduce the potential for burnout? How might you work toward such positive changes?

Activity 3–4

Time required: 15 minutes.
Materials required: newsprint and pens.

As with the previous phases of disaster, have workers list *implications* of stress reactions during the letdown phase, as well as suggestions for coping with these reactions. Record on newsprint.

Activity 3–5

Time required: flexible.

Post the newsprint charts listing participants' suggestions for coping with stress in the alarm, action, and letdown phases of disaster. During the section on interventions, build upon these charts with additional information and discussion from participants.

Activity 3–6

Time required: 20–30 minutes.

Ask participants to generate two lists, one being the positive aspects of disaster experience, and one being the negative. Use newsprint to record them. Ask participants to remember disaster operations they have been involved in or to imagine themselves in one. The following questions may be helpful:

- What were some of the positive experiences you had as a worker?
- What did you feel good about?
- What skills did you get to use?
- What did you contribute to the successes of the operation?
- What was most meaningful to you?
- What did you miss after the event was over?
- Was there anything positive you took away from the experience?
- What aspects of the experience were you relieved to have finished?

- What were some of the experiences that were most difficult for you?

- What were you glad to leave behind?

Answers to the above will vary, depending on the type of disasters that workers have experienced. Some disasters generate far more negatives for workers because of the tragedy and traumatic stimuli involved. Others, where traumatic stimuli were less dramatic and workers were involved over long periods of time, may generate more positives.

Be sure to allow adequate time for this exercise. Often, this exercise becomes a debriefing for unfinished business of prior disasters in which workers have been involved.

Section 4

Learning to Manage Stress: What the Worker Can Do

Introduction

Virtually all the literature on stress management emphasizes this positive message: Individuals can learn to manage their stress adaptively and to enhance their wellness, so that life can be enjoyed as a challenge, not seen as a threat (Charlesworth and Nathan 1984). The same brain centers that trigger the alarm response can be called upon to slow these processes through the "relaxation response," which returns the body to a natural, balanced state (Davis et al. 1982).

This section is not a comprehensive compilation of stress management techniques, which are myriad and diverse, but it does address the two most basic areas:

- *Assessing one's own stress*, including perceptions of stress, coping techniques, and social support systems

- *Developing a healthy lifestyle*, with emphasis on exercise and nutrition as important components of health and well-being

Learning to manage stress may involve a change of lifestyle and new ways of viewing the world (Charlesworth and Nathan 1984). Such changes can take time; basic mastery of stress management can take weeks or months. The serious student should augment this monograph with some of the excellent workbooks and tapes on stress management listed under this section's "Supplementary Materials" and in the appendix. Local programs and classes on stress management are available through adult education programs, community colleges, physical fitness and wellness centers, hospitals, and clinics.

Assessing One's Own Stress

How an individual responds to stress is determined in part by perceptions (or appraisals), coping skills and strengths, and adequacy of the support system.

Perceptions of Stress

Each person's perception of what events are stressful is different. Some events, however, are commonly recognized as life-change stressors. Additional stressors may increase vulnerability. [See Activities 4-1 and 4-2.]

One aspect of stress appraisal relates to thoughts and beliefs. People are continually engaged in a dialog with themselves. This internal "self-talk" is how people describe and interpret the world. If the self-talk is realistic and accurate, the person generally functions well. If it is irrational or untrue, the person will likely experience stress and emotional disturbance (Davis et al. 1982). For example, the boss may call an employee into his office. His intent may be to compliment the person's work. The employee, however, may believe that he is going to be asked to work late again, and may feel irritated at being required to do too much work. By the start of the meeting, the employee may already be angry and resentful, having specific feelings and physiological reactions based on a belief about what is going to happen. If the employee had expected a compliment, the reaction would have been different—perhaps even pleasure or excitement (Charlesworth and Nathan 1984).

Negative self-talk is usually connected to *irrational ideas*. Irrational ideas are based on misperceptions ("this person probably won't like me") or perfectionistic shoulds, oughts, and musts ("I should have been able to do more in that situation") (Davis et al. 1982). Common irrational beliefs include the following:

- It is absolutely necessary for an adult to have love and approval from peers, family, and friends.
- One must be unfailingly competent and almost perfect in all undertakings.
- A person should feel fear or anxiety about anything that is unknown, uncertain, or potentially dangerous.
- People are helpless and have no control over what they experience or feel.
- People are fragile and should never be hurt.
- When others disapprove, it means a person is wrong or bad (Ellis 1971; Farquhar and Lowe 1974; Davis et al. 1982).

Another form of irrational thought is to "awfulize" (Davis et al. 1982) by making terrible, catastrophic interpretations of experiences. For example, a person who has been feeling tired lately thinks he has cancer; a woman's husband works late one night and she is sure he is having an affair. The emotions that are felt are, in fact, awful.

Self-talk can also be positive and supportive. People can learn ways to encourage themselves in difficult situations, give themselves instructions, or "talk through" an event. In many ways, emergency workers have learned to use positive self-talk as a way to get through stressful or tragic circumstances. Emergency workers, however, also have very high self-expectations, a lot of "shoulds"—which at times may be unrealistic—about their performance. Workers need to identify both the negative and positive thoughts and self-talk they engage in, and begin to look at ways to change irrational ideas and perceptions. It should also be noted that individuals need factual information in order to grasp the magnitude and meaning of an event, and to relate their stress reactions to the event. [See Activity 4-3.]

Coping Techniques

Coping has been defined as those things a person does, feels, or thinks to tolerate or decrease the negative effects of an experience or to master a threatening situation. Coping may focus *outward*, toward changing the environment ("problem-focused coping"), or *inward*, toward changing the individual's emotional response to the stressors ("emotion-focused coping") (Folkman and Lazarus 1980). [See Activity 4-4.] Certain situations are best handled with one type of coping, other situations with the other type. Workers who can identify their usual coping styles and strengths will better understand their own reactions in a disaster setting [Activity 4-5]. When a coping mechanism inappropiate to the event is used, a person may remain in a state of disequilibrium or crisis and may need assistance in working through the problem. On the other hand, individuals who have *successfully* worked through past traumatic events have often developed strengths and coping skills that can help them and others survive a current disaster.

One of the simplest ways people recognize when they are under stress is body awareness. Such awareness can be of great help in developing conscious coping strategies. Lowen (1975) has pointed out that people inevitably tense muscles when anxious, and those with particular styles of dealing with stress tend to tighten specific muscle groups. For example, a woman who believes it is bad to express anger may develop chronic neck tension and pain; a man who is anxious about his job performance may develop chronic stomach problems (Davis et al. 1982). Many people are unaware of their body tension because they focus primarily on the outside world. Learning to recognize the body's messages is the first step in learning to manage stress reactions. (See Activity 4-6.]

Social Support Systems

"Social support" is the term social scientists use to describe positive interaction among people. These exchanges may involve passing along information, offering material help, or providing emotional support. The health implications of these exchanges are especially important during periods of stress, life transitions, and crises. More and more evidence demonstrates that people's relationships with their spouses, friends, families, colleagues, co-workers, and neighbors can buffer stress and have a positive effect on physical and mental health (California Department of Mental Health 1981). Because of the high stress inherent in their work, developing and maintaining good social support networks are of great importance to disaster workers.

Medical research has shown the following relationships between health and social supports.

- Socially isolated persons have two to three times the overall risk of dying compared to people with similar health who maintain supportive relationships.
- Terminal cancer affects divorced individuals of both sexes more frequently than married people.
- Separated, divorced, or widowed persons have 5 to 10 times the rate of mental hospitalizations compared to married people.
- Pregnant women under stress and without supportive, confiding relationships have three times the number of complications experienced by women undergoing similar levels of stress but with supportive personal relationships.
- Having a confidant gives significant protection against the development of depression (California Department of Mental Health 1982).

Research with disaster victims shows the importance of social support systems to their recovery, and health education literature for victims emphasizes the importance of maintaining and using supportive relationships. Supportive relationships are equally important to emergency service/disaster workers in coping with stress and maintaining health. Emergency service and disaster work can, however, undermine and severely tax personal relationships. Unusual or irregular work schedules, physical and mental fatigue, long periods of time away from home, and stress-related problems all serve to challenge even the best of personal relationships. [See Activities 4-7, 4-8, 4-9, and 4-10 for exercises to help individuals assess their personal support systems.]

However, disaster work provides both opportunities for and obstacles to social support. It is vital for workers to realize the importance of social support to their well-being; it is also useful for them to recognize the barriers and interferences that may exist so that they can work around them.

A. *Some of the characteristics of disaster work that PROMOTE supportive relationships include the following.*

1. People feel energetic, motivated to work hard together.
2. Usually a clear consensus exists about what needs to be done. People feel united in a common goal and priorities.
3. In the early hours or days of a disaster, organizations and individuals cooperate who never worked together before.
4. A strong sense of team develops.
5. A strong sense of community exists among workers and between workers and survivors.
6. Under adverse conditions, people dispense with some formalities, getting to know one another more quickly than under usual social circumstances.
7. In disaster, workers often become like a family—working, eating, and literally living together.
8. Workers quickly develop a sense of group identity, a feeling of "we're in this together." They acquire a common understanding, history, language, symbols, humor, and pride. Some groups memorialize this identity with souvenirs such as disaster T-shirts ("I survived the Great Flood of 1985").
9. A strong sense of adventure and excitement exists, as well as a sense of meaning and purpose. The "seductiveness" of disaster draws people to it and to each other; love affairs may occur.
10. A strong bonding or friendship often develops among people facing life-or-death circumstances together.

B. *Some of the characteristics of disaster work that INTERFERE with supportive relationships include the following.*

1. After the initial cooperative, or "honeymoon," stage, frustrations, irritations, and anger may develop among workers

due to lack of resources, communication breakdowns, equipment failures, or human errors.

2. Workers become fatigued and irritable. They may begin to "rub each other the wrong way."

3. As the emergency period consensus on priorities passes, workers and organizations may find themselves in conflict over lines of authority, allocation of resources, and allocation of blame.

4. Workers become tired of continual interactions with victims and may want to isolate themselves in their time off.

5. Workers may become tired of the disaster and prefer not to talk about it, think about it, or even associate with coworkers in their time off.

6. Workers may feel that with so much work to do, they cannot socialize or play. They may feel guilty taking time off for relaxation or social interaction.

7. Workers may have strong emotions regarding the disaster, but may be uncomfortable talking about them because of the following.

    - They think workers are supposed to be professional or "have their act together."

    - A traditional "macho" ethic prevails among some rescue and disaster relief organizations, and workers are expected to be "strong."

    - Others may not be talking about their feelings. Few role models exist for dealing with the emotions involved in disaster work.

8. Conflict or estrangement may develop between workers and their primary support system, the family.

    - Workers' long hours or days on the job may place unusual demands on their families, particularly if the families are also victims of the disaster.

    - Families may initially be supportive of workers' roles and responsibilities, but frustration and anger may arise the longer the workers are unavailable to them.

    - Workers may be unavailable to their families both *physi-*

cally, because of long work hours, and *emotionally*, because of psychological involvement in the disaster, fatigue, and so forth.

- Workers may feel their families simply cannot understand the disaster experience. The families' irritation compounds the problem, and isolation and estrangement may occur.

9. Disaster workers such as Red Cross or FEMA staff may be sent to disasters geographically distant from their home communities. They are isolated from their family and friends and may not be familiar with the social and recreational resources of the community in which they are working.

C. *The following suggestions may help disaster workers to DEVELOP or MAINTAIN supportive relationships.*

1. Each worker should develop a *buddy system* with another coworker. The two should keep an eye on each other on the job, asking "how are you doing"; suggesting breaks when they are needed; reminding each other to eat; and giving verbal encouragement such as "you're doing a great job."

2. *A staff meeting or critique* should be provided at least once a shift for people who work together. Such meetings:

   - Aid communication and sharing of information and can clear up any miscommunications that have occurred

   - Provide an outlet for people to discuss their frustrations with the job, misunderstandings with each other, etc.

   - Help people air their feelings, especially when specific questions such as "What bothered you most?" and "What pleased you most on this shift?" are asked

   - Remind disaster workers about normal responses and feelings, including feelings of guilt in taking time off, as well as healthy ways to take care of self and others, and the importance of social activities and social support

3. On long disaster operations, a priority for workers should be to establish *relationships with new coworkers* and to spend respite time with them away from the disaster scene.

   - Take breaks and meals together.

- Take a walk together. Get away from the disaster scene. Talk about normal things in addition to the disaster (home, friends, family, hobbies).

- Seek out others who enjoy similar activities; for example, put a sign on the staff bulletin board for a jogging partner or suggest a basketball game after work.

- Organize group social activities: go to a movie, go out to dinner, have a volleyball tournament, have a party after work, take a hike, or go to a picnic.

4. On long disaster operations away from home, workers should make every effort to *stay in touch with family and friends* back home.

   - When packing to go to the disaster assignment, taking a few mementos from home helps the worker keep in touch psychologically: pictures of family/friends/pets, something humorous, something cozy (a favorite sweater or slippers).

   - Once phones are working, workers should call home often—it is money well spent. Sharing stories and *feelings* with family and friends and listening to theirs help prevent the sense of being strangers when workers are reunited with their families.

   - Letters, cards, and pictures sent home help to maintain closeness.

   - If families can visit the disaster area, they should be oriented to what has been going on. They can volunteer and should be introduced to coworkers. This can decrease the sense of isolation and estrangement that workers and families often feel from one another, and can make relationships much easier when workers return home.

5. When a disaster operation is over, a *debriefing* can provide workers with peer support in working through the feelings involved in the work. (Debriefing is described in detail in the section on "Helping the Helpers: Interventions.")

6. Disaster workers should be helped to recognize that some sadness, loss, and letdown may occur when a disaster operation is over. Some of this has to do with losing or changing the nature of the special relationships that have developed. Talking about these feelings with the people involved, or making plans to *keep in touch or continue professional collaboration* when the disaster is over, may help to alleviate this sadness.

Developing a Healthy Lifestyle

Exercise

Exercise both enhances health and helps prevent negative effects of stress. Exercise can *strengthen* the body's systems by developing stamina and endurance to help the body cope with demands made upon it. At the same time, exercise *reduces* the physiological arousal and muscle tension of the stress response syndrome, helping the body move from a state of alarm back to a state of relaxation.

Emergency services and disaster work can be both psychologically stressful and physically demanding. Sudden and intense periods of strenuous activity, often without opportunity for adequate warmups, may occur, as in the case of the firefighter who must respond to an alarm in the middle of the night. On the other hand workers may experience lengthy periods of physical inactivity, often combined with extreme mental stress, as in the hotel disaster where rescuers were forced to wait for hours while crane operators removed the heavy debris covering the victims. For these reasons, exercise and physical fitness are extremely important to emergency workers.

A. *Benefits of exercise*:

1. *Physical benefits of exercise*:
   - Increased efficiency of the heart and circulatory system
   - Improved pulmonary function
   - Reduced resting pulse and blood pressure
   - Reduced body fat, better control of body weight
   - Increased muscular strength, endurance
   - Increased immune response

2. *Psychological benefits of exercise*:
   - Improved mood (hormones released in brain and blood during exercise are natural pain killers and mood elevators)
   - Decreased anxiety and hostility
   - Better concentration, alertness, cognitive functioning
   - Improved sleep

- Better appearance

- Improved self-esteem

Lack of physical exercise is a major contribution to (Davis et al. 1982):

Coronary heart disease
Obesity
Joint and spinal disc disease
Fatigue
Muscle tension, spasms, tics, tremors, backache
Depression

B. *Components of physical fitness*: The three components of physical fitness are:

Cardiorespiratory endurance: stamina
Flexibility: suppleness
Muscular function: strength

All three components of fitness are important, and all contribute to stress reduction. Cardiorespiratory endurance, however, is considered the most important fitness component for adults, and individuals should be sure that their personal fitness program includes this component (Charlesworth and Nathan 1984).

C. *Types of exercise*: (Davis et al. 1982)

1. *Low-intensity exercise*: to improve muscle strength, flexibility, and endurance

    - *Calisthenics*: stretching, limbering up

    - *Isotonics*: contracting muscles against a resistant object with movement, such as weight lifting

    - *Isometrics*: contracting muscles against resistance, without movement, such as pushing against a wall

2. *Aerobic exercise*: to strengthen cardiovascular system and increase stamina

    - Consists of sustained, rhythmic activity of large muscle groups, especially the legs

    - Includes running, jogging, swimming, dancing, bicycling, and brisk walking

- Uses large amounts of oxygen, causing an increased heart rate, stroke volume, and respiratory rate and relaxation of small blood vessels

3. *Competitive sports*: While primarily aerobic in nature, such competitive sports as tennis, football, and soccer have the added benefit of being a good outlet for negative emotions (e.g., irritability and anger).

D. *Features of Exercise Programs*: A healthy exercise program takes the following into consideration:

1. *How much*: Experts recommend exercise at least 3 days a week, for 20 to 30 minutes per session.

2. *Build up gradually*: Too much too soon can be an additional stressor that can be dangerous. A physician should be consulted before beginning an exercise program by persons who:

   - Are over 30; most doctors recommend a stress electrocardiogram for persons over 40

   - Are obese (20 percent over ideal weight)

   - Have high blood pressure, arterial narrowing, or high blood cholesterol

3. *Contraindications*: A doctor should be seen if any of the following develop:

   Chest pain
   Heart palpitations
   Dizziness
   Extreme difficulty getting breath (Davis et al. 1982)

E. *Exercise and disaster work*: Because of the physical and psychological stresses involved in disaster work, exercise is of the utmost importance. Disaster workers should do the following.

1. Participate in a regular exercise program to maintain good physical condition and health and be able to manage the physical demands of the job.

2. Whenever possible, do warm-up exercises before periods of intense physical activity. Even a few simple stretches while waiting or inactive can be helpful.

3. During extended periods of inactivity (waiting, driving long

distances, or performing administrative duties such as writing reports), perform whatever exercises are possible:

- Stretching, especially neck, shoulder, and back muscles
- Isometrics, such as pushing hands together at chest level, pushing feet firmly into the floor, pushing down on seat of chair with hands (as though to lift self off the chair), and contracting and releasing muscles

4. During long disaster operations (several days or longer), be sure to exercise every day in one of the following ways:

    - Calisthenics to release muscle tension
    - Aerobics, such as jogging on a break or after a shift, to release tension and maintain stamina, health, and mood
    - Sports to provide an outlet for tension and aggression
    - Exercising with coworkers to build or sustain support systems during long, stressful disaster operations

5. Be sure to engage in some form of vigorous exercise (aerobics or sports) within 24 hours of an operation or critical incident.

Nutrition

Emergency and disaster work places added demands on the body, thus increasing the importance of good nutrition. The *physical exercise* and strain of disaster work raises the body's need for certain nutrients and at the same time depletes other nutrients. In addition, emergency or disaster conditions can drastically interfere with eating and nutrition:

- Workers may forget or disregard the need to eat, because of
    - Volume and urgency of tasks to be done
    - Stress, adrenalin, and "fight or flight" reactions, which may mask or interfere with normal appetite signals
    - Distressing or gory sights, sounds, smells
- Food supplies may be temporarily diminished if transportation is disrupted, stores and restaurants run low on stock, etc. Workers and victims may need to eat whatever is available, with balanced nutrition an unrealistic goal.

- Food preparation may be difficult and time consuming when utilities are disrupted, leaving:
  - Inadequate water for handwashing, cleaning, and cooking food
  - No fuel source for cooking
- Workers, in their desire to help, often see that victims eat first, disregarding their own needs.
- Coffee, donuts, and fast foods such as hamburgers and french fries are often donated by relief agencies and local franchise merchants.

Under ordinary circumstances, the body needs some 40 to 60 nutrients a day to maintain health. Stress makes even more demands on intake; certain nutrients are essential for the body to function properly under stress. For example, active or tense muscles produce a high level of lactic acid; calcium is needed to counteract it. A diet too low in calcium can leave an individual feeling anxious, irritable, and fatigued (Davis et al. 1982). Vitamin C is essential in the functioning of the adrenal glands, which help keep emergency workers alert. Stress can also deplete body reserves and increase the need for such nutrients as protein, calcium, and vitamins C, A, and B-complex (*Brandon Sun* 1983; Charlesworth and Nathan 1984). Food alone will not make a person healthy, but good nutrition, combined with regular exercise, can contribute to stress management and well-being.

A. *Benefits of good nutrition*: A good diet can help prevent or control the following (Davis et al. 1982; Boston Women's Health Collective 1984):

1. *Physical conditions*

Obesity
High levels of blood fats
Heart disease
High blood pressure
Stroke
Diabetes
Indigestion
Ulcers
Constipation
Dental caries
Some cancers
Benign breast conditions

Osteoporosis
Gallstones

2. *Psychological conditions*

Depression
Irritability
Moodiness
Anxiety, nervousness
Headaches
Fatigue
Insomnia

B. *Basic guidelines for good nutrition*: An ideal diet for everyone does not exist. People's needs differ with age, body size, sex, physical activity, heredity, and conditions such as allergies or pregnancies. Some general guidelines, however, apply to good nutrition.

The following guidelines were adapted from a variety of sources (Davis et al. 1982; Boston Women's Health Collective 1984; Charlesworth and Nathan 1984). They are consistent with the *Dietary Guidelines for Americans* of the U.S. Departments of Agriculture and Health and Human Services (1980). While opinions and approaches to nutrition vary today, experts agree that these recommendations are sound and safe.

1. *Eat a variety of foods*: Necessary daily nutrients include vitamins and minerals, amino acids from proteins, essential fatty acids from vegetable oils and animal fats, and sources of energy (calories) from carbohydrates, proteins, and fats. Water is also an essential nutrient. Most foods contain a variety of nutrients, but no food contains all the essential elements in the amounts the body needs. Therefore, the greater the variety of foods eaten, the better the likelihood that the body will obtain a good balance. Daily selections from the following food groups are recommended:

Vegetables and fruits—4 servings
Bread, cereal, and grain products—4 servings
Milk, cheese, yogurt—2 servings
Meat, poultry, fish, eggs, beans, peas—2 servings

2. *Maintain your ideal weight*: Being overweight increases an individual's chance of developing such chronic conditions as high blood pressure, diabetes, and heart disease. In addition, it places added stress on the body, can interfere with one's ability to cope with environmental stresses and physical demands, and can affect one's self-esteem. Most sources agree

that a person's weight should be about what it is at age 20 to 25. The recommended readings listed under "Supplementary Materials" at the end of this section provide suggestions for weight loss programs for persons whose weight is above the ideal level.

3. *Avoid too much fat and cholesterol*: Much controversy exists on the connection between fats, blood cholesterol, blood pressure, and heart disease. Some people can consume diets high in fats and cholesterol and still maintain a normal blood cholesterol level, although the most widely accepted theory states that saturated fats tend to elevate the level of cholesterol in your blood. High levels of blood cholesterol are associated with heart disease. In general, Americans eat far more fat than is necessary: 45 percent of our calories are obtained from fats, while a healthy diet should contain only 30 percent or less (Davis et al. 1982). Therefore, intake of the following foods, which are high in saturated fats and cholesterol, should be limited:

   Meat such as beef, lamb, pork, and pork products (e.g., sausages)

   Chicken fat, meat drippings, lard

   Eggs and organ meats

   Butter and stick margarines

   Coconut oil, palm oil, hydrogenated shortening

   Whole milk, whole milk cheese, cream, ice cream

   Products made from the above, such as pastries and gravy

4. *Eat whole foods with adequate fiber*: Processed, refined foods have lost much of their fiber and nutrients. Whole foods such as vegetables, fruits, grains, and nuts provide energy, nutrients, and fiber necessary to a healthy diet. Adequate fiber intake can help control weight by absorbing fats and can reduce symptoms of chronic constipation and other gastrointestinal disorders.

5. *Avoid too much sugar*: Sugar is a simple carbohydrate that provides nothing nutritionally except calories; it contains no starch, fiber, vitamins, or minerals. Sugar can have dramatic effects on the blood sugar level, especially for the three out of five Americans who may be hypoglycemic or prediabetic

(Davis et al. 1982). Eating foods high in sugar causes the blood sugar level to rise, giving a boost in energy. The sudden sugar then stimulates the pancreas to produce insulin to counteract the sugar in the blood. In many people, the insulin depresses the blood sugar to a level lower than before, causing such symptoms as dizziness, irritability, depression, tremor, nausea, anxiety, and more hunger pangs. The result can be both a physical and emotional rollercoaster (Davis et al. 1982). To avoid excess sugar:

- Use less white sugar, brown sugar, raw sugar, honey, syrup.
- Eat less candy, soft drinks, ice cream, cookies, etc.
- Read food labels: Avoid those with sucrose, glucose, maltose, dextrose, lactose, fructose, or syrups appearing first.
- Use fresh fruits or fruits canned without syrup.

6. *Avoid too much sodium*: Adults in the United States consume about 10 times the sodium they need, and most Americans have developed a taste for far more sodium than is healthy. Too much sodium is a major hazard for persons who have high blood pressure.

   Sodium is present in table salt, baking soda, baking powder, monosodium glutamate (MSG), salty snacks, processed foods, sandwich meats, condiments, sauces, pickled foods, and soft drinks. Many medications, such as antacids, also contain sodium. Up to half an individual's sodium intake may be "hidden" in preservatives and flavorings or as a naturally occurring ingredient in food. To avoid too much sodium, individuals should:

   - Cook with small amounts of salt; avoid salting foods at the table.
   - Learn to appreciate the natural flavor of foods without salt.
   - Limit the amounts of salty foods eaten, including snack foods, condiments and sauces, pickled foods, and cured meats.
   - Read food labels and become familiar with those foods high in sodium.

7. *Avoid alcohol or use in moderation*: Alcohol is high in calories and contains few nutrients. It can deplete the system of B vitamins and minerals, which are helpful in coping with stress.

For persons who use alcohol, a limit of one or two drinks a day is recommended (Davis et al. 1982; Charlesworth and Nathan 1984).

8. *Avoid caffeine*: Caffeine is a stimulant. It affects the central nervous system, chemically inducing a "fight or flight" response in the body and making people nervous and edgy. It can deplete the body of vitamin B and can create an artificial sense of "energy" that interferes with appetite, good nutrition, and getting needed sleep. For these reasons, individuals should limit or avoid caffeine, especially when under stress. Caffeine is contained in coffee, black tea, cola, and chocolate drinks.

9. *The question of vitamin and mineral supplements*: Nutritionists disagree on the need for supplementary vitamins and minerals. Some say that a well-balanced diet provides all that are necessary (Davis et al. 1982). In reality, in the absence of an obvious deficiency disease, no one really knows the effects of added vitamins and minerals (Boston Women's Health Collective 1984).

   Experts do know that no single vitamin or mineral is most important. They must work together, and taking large amounts of any one nutrient will not help if a person is deficient in others. Those nutritionists who favor food supplements cite the following facts (Davis et al. 1982; Boston Women's Health Collective 1984):

   - Processed foods, such as white flour and sugar, are stripped of many nutrients. "Enrichment" replaces only some iron and B vitamins.

   - Supermarket produce is often grown in mineral-depleted soil, picked before it is ripe, and held for long periods in cold storage, lowering its nutritional value.

   - Chlorinated water interferes with the absorption of vitamin E.

   - Certain conditions or times of life require specific extra vitamins and minerals: pregnancy and nursing; birth through adolescence; after menopause.

   - People under stress require more vitamins and minerals, especially the B vitamins.

   - Certain drugs deplete the body of nutrients or interfere with the body's ability to absorb them.

- People who smoke need about 120 mg. of vitamin C a day, twice the usual amount.

- Aspirin affects folic acid absorption and depletes tissues of vitamin C.

Persons who have decided to take vitamin and mineral supplements should check to see what percent of the U.S. Recommended Dietary Allowances (RDAs) the product contains. It is important not to take arbitrary megadoses of vitamins, especially A and D, which can be harmful.

C. *Nutrition and disaster work*: The following suggestions may be helpful to workers in sustaining energy and obtaining nutrients during a disaster operation, especially one that lasts for several days or weeks.

1. Eat regularly, even if not hungry. Develop a buddy system with a coworker to remind each other to take breaks and eat.

2. Remember that it is as important for workers to eat as for victims. Workers will be of little help to anyone if they run out of energy, become excessively irritable, or get sick.

3. Eat four to five times a day, in small amounts. This will help to avoid the body stress and physical symptoms of hypoglycemia, will provide a more constant blood sugar and energy level, and will help to avoid the discomfort of indigestion caused by working hard on a full stomach.

4. Carry high-energy, nonperishable foods in purses or vehicles. Fruit, dried fruit, granola bars, nuts, and trail mix are good sources of energy and nutrients.

5. Maintain an adequate fluid intake, especially if exposed to heat. Carry water, juice, or fluids with electrolyte supplements in a canteen or thermos.

6. Avoid caffeine, sugar (such as donuts), and high-fat, high-sodium fast foods. These may be all that are available for a while; however, if the disaster continues for any length of time, the nursing or food (mass care) supervisor should be consulted to arrange:

   - Substitution of fruit and high protein snacks for donuts and cookies

   - Substitution of decaffeinated coffee, tea, hot grain beverages, mineral water, fruit juices, and milk for coffee and soft drinks

7. Take a good vitamin and mineral supplement to be sure the body is getting the nutrients it needs under less than ideal dietary conditions.

8. Get away from the disaster scene for meals.

    - A break is needed from disaster stimuli and interaction with disaster victims.

    - A calm, relaxed atmosphere can aid digestion as well as reduce muscle tension and other stress symptoms.

9. Eat with a friend or coworker. Interaction, support, and humor can help to replenish workers emotionally as well as physically.

[To complete this chapter, see Activities 4-11 and 4-12.]

Supplementary Materials

This section has presented some basic approaches to managing stress. Many additional stress management techniques can be helpful in dealing with stress symptoms. Detailed training on all these techniques is beyond the scope of this manual. However, the recommended readings listed below discuss ways to understand stress reactions, assess which are most problematic, and choose specific techniques for managing particular stress reactions. Specific techniques covered include:

Progressive relaxation
Breathing
Meditation
Yoga
Imagination
Guided imagery
Self-hypnosis
Thought stopping
Refuting irrational ideas
Assertiveness training
Time management
Biofeedback
Nutrition
Exercise

Audiovisual Materials

The following materials are recommended to augment the lecture material. Guidelines for their use are included in the appendix.

- "Friends"
- "Relations"
- "Relaxation and Stress Management Program"
- "Human Response to Disaster: Training Emergency Service Workers"

Recommended Readings

Charlesworth, E.A., and Nathan, R.G. *Stress Management: A Comprehensive Guide to Wellness*. New York: Atheneum, 1984.

Davis, M.; Eshelman, E.R.; and McKay, M. *The Relaxation and Stress Reduction Workbook*. Oakland, CA: New Harbinger Publications, 1982.

Activities

Activity 4–1

Time required: 15 minutes.
Materials required: copies of stress and support system tests (may be duplicated from training manual or ordered in advance).

This activity can help workers assess their current stress level and support system. Have participants complete the stress and support system tests, then use the following questions for discussion:

- Was anything illuminating or surprising to you in doing the exercise?

- What was the most useful thing you learned in doing the exercise?

I First complete the stress level and support network strength sections below.

STRESS LEVEL

Circle each stress event which you experienced within the last 12 months. Then add the scores for each item you circled and put the total in the box.

PERSONAL

(6) Serious injury or illness

(6) Alcohol, drug, or emotional problem

(4) Marriage

(4) Death of close friend

(2) Trouble with friends or neighbors

(2) Begin or end school or training program

WORK & FINANCES

(6) Lost job, retired

(4) Sold or bought home

(2) Changed jobs, promotion

(2) Trouble with boss

FAMILY

(10) Death of spouse or immediate family member

(8) Divorce

(6) Reconciliation or separation

(4) Serious illness or injury of family member

(4) Pregnancy or birth

(4) Family arguments or trouble with in-laws

(4) Child enters or leaves home

(2) Relative moves into household

(2) Moved to new residence

STRESS TOTAL:

SUPPORT NETWORK STRENGTH

Circle *one* response for *each* item. Then add the socres next to each item you circle and put the total in the box.

1. At work, how many persons do you talk to about a job hassle?
   none (or not employed) (0) one or two (3) two or three (4) 4 or more (5)

2. How many neighbors do you trade favors with (loan tools or household items, share rides, babysitting, etc,)?
   none (0) one (1) two or three (2) four or more (3)

3. Do you have a spouse or parner?
   no (0) several different partners (2) one steady partner (6)
   married or living with someone (10)

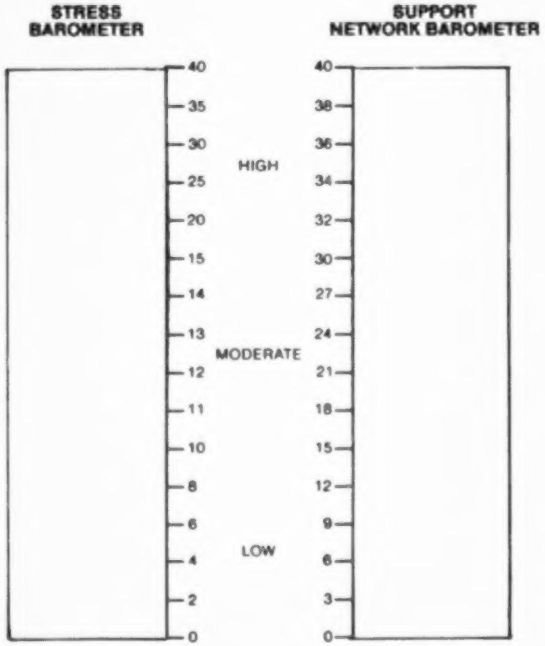
4. How often do friends and close family members visit you at home?
   rarely (0) about once a month (1) several times a month (4)
   once a week or more (8)

5. How many friends or family members do you talk to about personal matters?
   none (0) one or two (6) three to five (8) six or more (10)

6. How often do you participate in a social, community or sports groups?
   rarely (0) about once a month (1) several times a month (2)
   once a week or more (4)

SUPPORT TOTAL:

II Below, draw a line across each barometer where your scores for stress level and network strength fall.


STRESS BAROMETER
SUPPORT NETWORK BAROMETER
40
35
30
25
20
15
14
13
12
11
10
8
6
4
2
0
HIGH
MODERATE
LOW
40
38
36
34
32
30
27
24
21
18
15
12
9
6
3
0

If your STRESS LEVEL score is:

Less than 10:
You have a *low stress level* and your life has been stable in most areas.

10–15:
You have a *moderate stress level* and there has been a lot of change in your life.

16 or more:
You have a *high stress level* and there have been major adjustments in your life.

If your SUPPORT NETWORK score is:

Less than 15:
Your support network has *low strength* and probably does not provide much support. You need to consider making more social contacts.

15–29:
Your support network has *moderate strength* and likely provides enough support except during periods of high stress.

30 or more:
Your support network has *high strength* and it will likely maintain your well being even during periods of high stress.

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Activity 4–2

Time required: 20 minutes.

This exercise helps to identify stressful situations and some possible approaches to managing them (Davis et al. 1982). Have each individual make a list of 10 current personal life situations that cause anxiety or distress. Include any situation that a person is likely to encounter in the relatively near future. Be specific, including the persons and the setting involved.

Rate the stressful experiences on a scale of zero to one hundred. Total relaxation is zero, and the most stressful of experiences is 100. When the list is complete, have individuals rank order their items from least stressful to most stressful.

Have the participants examine their list of stressors and ask themselves the following questions:

- Are there any demands I can eliminate or deadlines I can change to reduce my stress?
- Have I prioritized my tasks in a logical way?
- Am I managing my time effectively for getting my tasks done?
- Is there anyone I should be talking to or working with to get my tasks done or reduce my stress?
- Am I relying on my support systems? How can I use them more effectively?
- Are there any stressful situations on the list that I would like to learn to manage more effectively, e.g., by learning to be more assertive, learning to be feel more self-confident, learning to relax?

Activity 4–3

Time required: 40 minutes.
Materials required: newsprint and pens.

Divide participants into small groups of about five each. Have each group answer the following questions and record their results on newsprint to report back to the large group. Allow about 20 minutes for the small group exercise and 20 minutes for large group reporting.

- In your work as an emergency service or disaster worker, what are some common thoughts that tend to "awfulize" the situation or predict the worst possible scenario? For example, "I know there won't be enough food to take care of everyone in the shelter" or "I know that mudslide is going to close the road before we get all the equipment in."

- What are some *positive ways to deal with these irrational or unwanted thoughts*? Some common ways include:

  - *Distraction*: focus on something you *can* do, such as moving as much equipment as possible before the road closes

  - *Thought-stopping* or cognitive intervention: "Stop. That is an irrational and unhelpful thought."

- What are some thoughts you use as an emergency worker to normalize the situation in your mind, or make it seem not so bad? Emergency workers are very good at this, so make your list as complete as possible. For example, "There's a lot of property damage here, but at least no one died" or "It's only an amputation. He's going to live. I've seen worse."

- What are some of the unrealistic self-expectations that emergency workers have in their minds—some of the shoulds, ought-tos, and musts that they try to live up to? Think of incidents or events when this kind of self-talk occurred:

  I should have . . .
  If only I had . . .
  A good worker would have . . .
  In such and such a situation, a good worker should . . .

- When this list is complete, go down the list and discuss what is unrealistic or irrational about each item. How is each irrational expectation problematic to you as an emergency worker? The purpose of this exercise is not to lower standards for professional performance, but simply to see how unrealistic self-expectations can cause undue stress.

- What are some of the positive things you give yourself mentally to help you through difficult situations? Again, emergency workers are very good at this, so make a complete list to share with the group. Some common types of positive self-talk that emergency workers use include:

  - Giving yourself permission to feel certain emotions: "It's normal to feel a little queasy. It will go away in a minute."

- Giving yourself instructions or "talking yourself through": "Take a deep breath. More help is on the way. The first step is to . . . next I'll do so and so."
- Substituting positive for negative self-statements: Instead of "I should have . . .," interrupting yourself and saying "I did a good job with that, considering the lack of equipment."
- Giving yourself positive feedback and reinforcement: "You're doing fine," "You've done this a thousand times before, it's a piece of cake for you."

Activity 4-4

Time required: 10 minutes.
Materials required: newsprint and pens.

Have participants give examples of inward and outward coping strategies, using their own experience as emergency or mental health workers. Examples might include:

Changing the environment

- Activities aimed at preventing, avoiding, altering, or managing the stressor (Cohen and Ahearn 1980)
- Problem-solving
- Eliminating hazards, such as cleanup following disaster
- Rescue activities aimed at reducing risks to life and health
- Recovery activities aimed at providing disaster victims with resources to rebuild and replace their losses

Changing one's emotional response

- Downgrading the experience (telling yourself "it could have been worse")
- Redefining the experience (seeing the disaster as an opportunity to develop or use new skills)
- "Working through" the experience to bring it into manageable bounds (talking about your experience to friends, in counseling, or in debriefing)

Activity 4–5

Time required: 20 minutes.
Materials required: paper and pencil, newsprint and pens.

Have each participant take out a blank piece of paper and a pencil or pen. Ask them to think of one situation in their past that they considered to be a personal crisis, emergency, or traumatic event. Write it down on the paper. Next, ask them to write down three (or more) *actions, thoughts, beliefs, personal characteristics, or strengths* that helped them to deal with that crisis, to cope, to survive it, to get through it. Have them reflect on how they use those strengths and coping skills in current situations and in their jobs as emergency workers. Allow about 5 minutes for individuals to complete this exercise. Have participants share their coping strategies with the group. Record them on newsprint so that all participants can see and think about effective coping techniques.

Ask participants to think about their work and their roles as emergency/disaster workers. Ask them to identify any additional strategies they use to cope with the demands and stresses of the job that have not already been identified in previous activities. The strategies may be *problem-focused* or *emotion-focused*. Record them on the newsprint.

Activity 4–6

Time required: 10 minutes.

Have participants get comfortable in their chairs and close their eyes. Guide them through a body inventory starting with their toes, feet, and legs, and continuing through their arms, stomach, back, shoulders, neck, forehead. Ask: What do you feel? Are they cold? warm? tense? relaxed? Is there any pain?

When they have finished, have participants open their eyes. Ask them to think about any life situations that may be causing tension for them and anything they might want to do to change the situation.

This exercise helps participants to recognize not only where they store tension, but also to recognize *when* they are experiencing stress.

Activity 4–7

Time required: 20 minutes.

The following questions were developed by the California Department of Mental Health as part of the "Friends Can Be Good Medicine" campaign to promote social support networks and mental health. Divide the class into small groups of about five participants. Give each group one or two of the following questions to discuss. Allow about 10 minutes, then have the large group reconvene. Have each small group report their responses to the questions.

- What is the nature of a health-promoting personal relationship?
- What is the nature of a health-destroying personal relationship?
- What are the barriers to supportive relationships?
- Why in our lives when we need others the most do we often pull away and withdraw into ourselves?
- What makes personal commitment so difficult?
- How do we renew personal relationships?
- What can organizations do to encourage personal relationships that are health promoting? (California Department of Mental Health 1982)

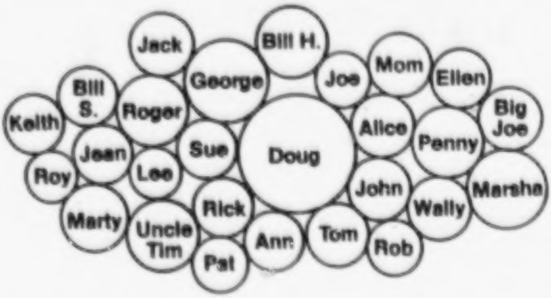
Activity 4–8

Time required: 20 minutes.
Materials required: paper and pencil.

Have each person take out three pieces of paper and a pencil or pen. Have each person complete the following exercise individually. Allow time at the end of the exercise for people to share, if they wish, things that they discovered or learned.

1. Draw a circle in the center of the first piece of paper. In it, write your name. Next, draw smaller circles around the big circle. These circles can vary in size. They represent members of your support group. Think about the persons with whom you have the strongest and closest bonds and begin filling in the various circles with their names. Jot down names as they come to mind: people you have warm feelings for; people you feel comfortable with; people you would like to talk with if you

were having a hard time; people you would enjoy sharing a meal with and people you would enjoy receiving a letter from. Don't worry about being "fair" or reasonable or logical--this exercise is for you alone. Think of places you have lived and friends you have had there. Think of friends from work, school, or political or religious groups you may belong to.



2. As you list friends' names, you may find yourself wishing you were in closer touch with some of them. If so, list those names on a second sheet of paper. This list might include old friends you have not seen in a long time or new friends you'd like to get to know better.

3. There may be some people for whom you find yourself feeling a special affection. You may feel you want to do something particularly nice for them—write them or phone them or even buy them a little treat or present. These may be people who have been important to you in ways that you feel deeply but maybe have not been able to express. Writes these friends' names down on the third piece of paper.

4. When you have finished diagramming your social support system, take a minute to review each name and remember the kinds of support you have exchanged with that person.

5. Decide what use to make of your diagram and two lists. Is there someone you would like to be in touch with or send a message to right now? Anyone you would like to share this exercise with? What would be a good thing to do with your diagram? Put it on your bulletin board or in your wallet? Pull it out and review it when you are feeling low?

6. This exercise can be modified to diagram support groups in specific settings, such as the work environment. Fill the circles with names of people with whom you have supportive relationships in that environment. Ask such questions as: Is there anything I would like to do to improve my relationship

with any of these people? Are there any people in my work environment who are not in these circles that I would *like* to have as a support? How can I go about establishing that relationship?

Source: Ferguson, T. Your support group. In: California Department of Mental Health. *Friends Can Be Good Medicine*. San Francisco: Pacificon Productions, 1981. Copyright 1981. Reprinted with permission. Ordering information is in the appendix.

Activity 4–9

Time required: 15 minutes.

There are three basic ways to find social support:

- To *wait* until it is given
- To *ask* for it
- To *give* it

Divide participants into three small groups. Assign each group one of the above approaches. Have them discuss the pros and cons of each approach. Suggest discussing the following:

- What is the hardest about that approach? easiest?
- What are the benefits? drawbacks?
- Share any personal experiences you may have had with using such an approach.

Have each small group report back to the whole when the class reconvenes.

Activity 4–10

Time required: 10 minutes.
Materials required: individual copies of chart; pencil.

Have participants individually fill out the following chart. Put the names of family, friends, and coworkers in the appropriate boxes across the top of the chart. Then check those whom you can tell about important needs, feelings, and events in your life. The total number of checks at the bottom of each column should give you an idea of those you trust and those you could learn to trust more. Use the totals to think about relationships you might want to work on or improve.

	Parent	Spouse	Neighbor	Co-Worker	Brother Sister	Other Family	Male Friend	Female Friend	Rabbi Priest Minister	Other
Made a mistake?										
Had a serious illness?										
Felt very angry?										
Were overlooked for promotion?										
Had financial difficulties?										
Wanted to have an affair?										
Felt lonely, depressed and hopeless?										
Were lonely?										
Were deciding to quit your job?										
Wanted a divorce?										
Knew your mother was dying?										
If you felt someone hurt your feelings?										
TOTAL										

Source: George, S. Whom would you tell if you. . . . In: California Department of Mental Health. *Friends Can Be Good Medicine*. San Francisco: Pacificon Productions, 1981. Copyright 1981. Reprinted with permission. Ordering information is in the appendix.

Activity 4-11

Time required: 1 hour.
Materials required: part I of this monograph; newsprint and pens; the following chart.

Divide participants into three groups. Assign each group one of the three disaster case studies presented in the first half of this monograph. Have participants in each group read their assigned disaster case study:

- Group 1: Kansas City hotel disaster
- Group 2: Louisiana floods
- Group 3: Flight 90 crash

Do not have participants read the discussion following each case study.

Distribute to each group the following chart. Have them fill in the name of their assigned disaster at the top of the chart. Then, have each group fill in the three columns, listing event, occupational, and organizational stressors and possible approaches to managing stressors for their particular disaster. Have a participant record each group's results on newsprint. Allow about 30 minutes for this portion of the exercise.

When charts are finished, allow individuals to read the discussion following their disaster in the text. Let them fill in any gaps in their charts.

Reconvene as a large group and have a reporter from each small group present findings, using the newsprint charts. Allow about 10 minutes for each small group report. Have groups compare differences and similarities among stressors for the different types of disasters. Discuss possible approaches to management of stressors.

Type of disaster: ____

Event stressors	Occupational stressors	Organizational stressors	Possible approaches to managing stressors

Activity 4–12

Time required: 10 minutes.
Materials required: individual copies of Self Analysis Profile and diagram; pencil.

Self Analysis Profile

The following items represent one way of categorizing a person's well-being. To complete the profile, read each of the questions below and score the item as follows:

Next to the question put a "1" if you rate yourself *poor*, "2" if you rate yourself *average*, "3" if you rate yourself *excellent*.

Emotional Category

1. How do you feel about yourself; how satisfied are you with who you are?

2. How accepting of others are you; can you respect people who view life differently?

3. Are you sensitive to your own emotional feelings; do you permit them to tell you about yourself?

Physical Category

4. Are you familiar with your body; are you sensitive to the messages which it sends?

5. Do you properly exercise your muscles; do you physically exert yourself in a regular routine of fitness?

6. Do you maintain a balanced diet; do you avoid excessive consumption of substances known to be hazardous to your health?

Social Category

7. Can you express yourself in public; are you able to communicate your thoughts and feelings to your friends?

8. Do you exert the energy required to establish and maintain friends; do you take the necessary time?

9. Are you actively involved in your community; do you think and work on problems confronting you and your neighbors?

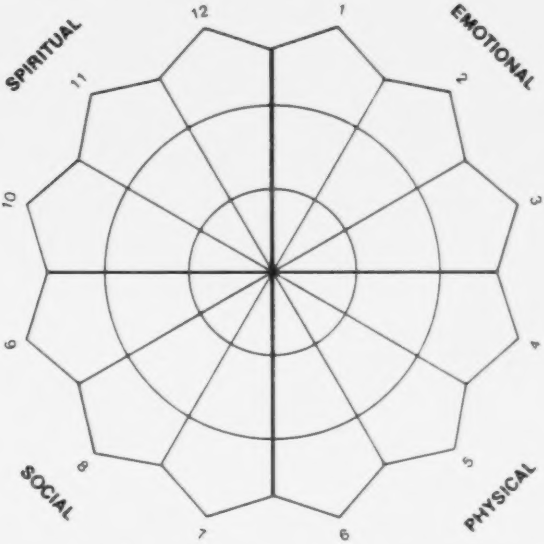
Spiritual Category

10. Are you engaged in reaching your own understanding of life; do you have a sense of purpose?

11. Are there ideas or activities or people that are of unquestionable value to you; can you truly give of yourself?

12. Do you spend time with yourself; can you blot out the noise and distractions of daily living?

Using your answers on the last page to guide you, you can create a graphic picture of your wellness. Each numbered pie-shaped segment of the circle below corresponds to the same numbered question on the preceding page. (They are divided into quarters representing four major dimensions of wellness.) Color in an amount of each segment corresponding to your answer in the question with the same number. The inner circle corresponds to a score of 1, the middle one to a score of 2, and the outer circle to a score of 3. You don't need to restrict yourself to these categories, however, and can fill in any amount in between. You may use different colors for each section if you like.



Source: Hammond, J., and Taylor, R.L. Self analysis profile. In: California Department of Mental Health. *Friends Can Be Good Medicine*. San Francisco: Pacificon Productions, 1981. Copyright 1981. Reprinted with permission. Ordering information is in the appendix.

Section 5

Helping the Helpers: Interventions

Introduction

This section will discuss approaches that may be helpful to workers and managers in dealing with disaster-related stress. It will suggest interventions that may be helpful before, during, and after a disaster.

The suggestions presented here are *guidelines*. No single suggestion will work for all people at all times. However, these ideas, in addition to those identified by course participants earlier in the training, are based on a wealth of experience and wisdom from disaster workers.

Predisaster Interventions: Prevention

Some of the most important stress management interventions for disaster workers take place predisaster. These activities are important in preparing workers for what they will likely encounter in the disaster situation. Preparation by both the individual worker and the organization can help minimize the effects of stress when it occurs, and can help individuals and the organization cope with stress in a more efficient manner. The following are some useful predisaster interventions.

Collaborative Relationship Between Emergency Services and Mental Health

A predisaster collaborative relationship can make training available for emergency workers in the mental health aspects of their work, so that they can anticipate and effectively deal with their own mental health needs and those of victims. Such predisaster planning between mental health and emergency services also paves the way for effective collaboration during and after a disaster. (See section 1, "Before the Training Begins: Collaboration Between Mental Health and Emergency Services.")

Orientation and Training

Training on the mental health aspects of emergency workers' jobs, both routine and in disaster, should be given as part of workers' initial on-the-job orientation and ongoing service training. Such education can prepare workers for the stresses they may experience in the work, decrease their vulnerability, and increase their effectiveness in dealing with job-related stresses when they occur.

Disaster Planning, Training, and Drills

Every worker with a potential role in a disaster should be thoroughly oriented to that role in the organization's disaster plan. Mental health personnel should regularly be included in each organization's disaster drills. Even disaster drills generate stress symptoms in those who participate. The interventions discussed in the rest of this section, including debriefing, can all be practiced effectively in a disaster drill.

Predisaster Personal Emergency Preparedness Plans

Having a personal and family emergency plan will help individuals to cope with whatever emergencies may occur while they are at home. Every emergency worker should be familiar with hazards and potential emergencies inherent in the local geographic area, and should have contingency plans for self and family. This is important not only to the safety of the family, but also to the availability of the worker for disaster assignment. The more quickly things can be taken care of at home, the more quickly the worker can report to work relatively free of family worries. Similarly, if the worker is at work when a disaster occurs, peace of mind and concentration will be enhanced if the person's family is prepared and able to cope.

Every family emergency plan should include the following:

- A home inspection to identify hazards and eliminate them
- A plan for different types of emergencies that might occur in the area, such as tornado, hurricane, earthquake, or hazardous materials spill; training for what to do before, during, and after each emergency
- A home fire safety plan, including smoke detectors, fire extinguishers, and preplanned escape routes
- An evacuation plan: what to take, where to go, where to meet or reunite

- A plan to care for children, individuals needing assistance (the ill or those with disabilities), and pets
- Training of every capable family member in how to turn off utilities and in first aid
- Prominent posting of emergency phone numbers

Emergency supplies and equipment should include the following:

- Food and water for 72 hours; include special diets, infant formula, and pet food
- Portable radio, flashlight, and batteries
- An adequate supply of prescription medications, prescription glasses, extra batteries for hearing aid, etc.
- First aid kit
- Blankets or sleeping bags
- Sanitation supplies
- Fire extinguisher
- Sanitation and personal hygiene supplies
- Alternate lighting: camping lantern, candles, matches
- Safety equipment: hose for firefighting, heavy shoes and gloves, work clothes
- Tools
- Cooking supplies: charcoal, Sterno, camp stove

It is a good idea to establish a mutual aid system within the neighborhood. With a bit of preplanning, neighbors can arrange to look out for and assist one another in times of emergency, pooling supplies as well as skills. Many neighborhoods develop emergency preparedness plans as part of the Neighborhood Crime Alert network. Such a mutual aid arrangement can give emergency workers increased peace of mind about their families' welfare.

In addition, every worker who is likely to be called out on emergency assignment on short notice is wise to have an emergency bag prepacked. Supplies should be tailored to the nature of the worker's usual type of assignment. If the assignment is likely to entail any length of time away from home, the bag should include the following:

- Clothes, including sturdy shoes and clothes for inclement weather
- Glasses and medications (including over-the-counter remedies for personal stress reactions—antacids, aspirin, antidiarrhea medicine, etc.)
- Personal hygiene supplies
- Paper and pens
- Forms or supplies necessary to the worker's disaster assignment
- Sleeping bag
- Cash and important identification, including official identification to allow access into restricted areas
- Change for pay phones (these circuits usually work when other phone lines are out of service)
- A picture of one's family and at least one comforting object from home
- A good book, a deck of cards, crossword puzzles

Excellent materials on home emergency preparedness and emergencies specific to a given geographic location are available at local chapters of the American Red Cross, local Offices of Emergency Services, or the regional office of FEMA.

Interventions During the Disaster

The following are suggestions for management of worker stress during a disaster operation:

Suggestions for Line Workers

A. Develop a "buddy" system with a coworker. Agree to keep an eye on each others' functioning, fatigue level, and stress symptoms. Tell the buddy how to know when you are getting stressed ("If I start doing so-and-so, tell me to take a break"). Make a pact with the buddy to take a break when he or she suggests it, if the situation and command officers allow.

B. *Encourage* and *support* coworkers. Listen to each others' feelings. Don't take anger too personally. Hold criticism unless it's essential. Tell each other "You're doing great" and "Good job." Give each other a touch or pat on the back. Bring each other a snack or something to drink.

C. Try to get some activity and exercise.

D. Try to eat frequently, in small quantities.

E. Humor can break the tension and provide relief. Use it with care, however; people are highly suggestible in disaster situations, and victims or coworkers can take things personally and be hurt if they are the brunt of "disaster humor."

F. Use positive "self-talk," such as "I'm doing fine" and "I'm using the skills I've been trained to use."

G. Take deep breaths, hold them, then blow out forcefully (Mitchell, unpublished paper).

H. Take breaks if effectiveness is diminishing, or if asked to do so by commanding officer or supervisor.

I. On long assignments away from home, remember the following:.

1. Try to make your living accommodations as personal, comfortable, and homey as possible. Unpack bags and put out pictures of loved ones.

2. Make new friends. Let off steam with coworkers (O'Callahan 1983).

3. Get enough sleep.

4. Enjoy some recreation away from the disaster scene (O'Callahan 1983).

5. Remember things that were relaxing at home and try to do them now: take a hot bath or shower, if possible; read a good book; go for a run; listen to music.

6. Stay in touch with people at home. Write or call often (O'Callahan 1983). Send pictures. Have family visit if at all possible and appropriate.

7. Avoid excessive use of alcohol.

8. Keep a journal; this will make a great story for grandchildren.

Suggestions for Supervisors

A. During the alarm phase, provide workers with as much factual information as possible about what they will find at the scene. Provide this information via radio communications or in the form of a quick briefing as new personnel arrive at the scene. This forewarning can help personnel gear up emotionally for what they may find.

B. Try to get information for workers about the location and well-being of their family members.

C. Remember that *early identification and intervention* of stress reactions is the key in preventing worker burnout. Review lists of stress symptoms; remember that multiple symptoms in each category indicate that worker effectiveness is diminishing.

D. Use mental health assistance in field operations if plans have been made to do so. Mental health staff can observe workers' functioning, support workers, and give advice to command officers about workers' fatigue levels, stress, reactions, and need for breaks (Mitchell 1983b).

E. Check in with workers by asking, "How are you doing?" Assess whether verbal response and worker's appearance and level of functioning jibe; i.e., workers may say they are doing "fine," but may be exhibiting multiple stress symptoms.

F. Try to rotate workers between low-stress assignments (such as staging areas), moderate-stress assignments, and high-stress tasks (Mitchell, unpublished paper).

G. Limit workers' time in high-stress assignments (such as triage or morgue) to an hour or so at a time, if at all possible. Provide breaks, rotation to less stressful assignments, and personal support.

H. Ask workers to take breaks if effectiveness is diminishing; order them to do so if necessary. Point out that the worker's ability to function is diminishing due to fatigue, and that you need him functioning at his full potential to assist with the operation. Allow worker to return to scene if he rests and his functioning improves.

I. On breaks, try to provide workers with the following:

1. Bathroom facilities

2. A place to sit or lie down away from the scene; quiet time alone

3. Food and beverages

4. Shelter from weather, dry clothes, etc.

5. An opportunity to talk about their feelings; coworkers, chaplain, or mental health staff can assist

Interventions After the Disaster

The following suggestions may be useful in the first hours, days, and weeks following a disaster.

Suggestions for Line Workers

A. "*Defusing.*" This may happen quite spontaneously, or may be an organized staff meeting immediately following an incident or operation. It is an informal debriefing in which personnel can begin to talk about their thoughts and feelings about the incident. It may happen over coffee or cleaning of equipment. The key is to keep the tone positive and supportive. No one should be criticized for how they feel or how they functioned. Team members and leaders should check on each others' well being and provide support to those who seem to be hardest hit by the incident (Mitchell 1983a).

B. Attend a debriefing if one is offered; try to get one organized if it is not offered (Mitchell, unpublished paper).

C. Talk about feelings as they arise, and listen to each others' feelings.

D. When listening, try to keep war stories to a minimum. It doesn't really help to hear that once-upon-a-time someone went through something worse (Mitchell, unpublished paper); it doesn't help to hear "it could have been worse, so quit your complaining."

E. Don't take anger too personally (Mitchell, unpublished paper). Anger is a normal feeling after a traumatic event, and it sometimes gets vented at coworkers inadvertently.

F. Recognition is important; coworkers should receive appreciation and positive feedback for a job well done.

G. Eat well and try to get adequate sleep in the days following the event.

H. Relaxation and stress management techniques are helpful.

I. Maintaining a normal routine and "taking care of business" help maintain a sense of order and accomplishment.

J. The transition back into home and family life can be difficult after a disaster or critical incident. Workers should tell the family the story of what happened, including what the worker saw and did. Showing pictures, videotapes, or newspaper articles of the event can help. Workers should also encourage their families to tell what it was like for them in the worker's absence; families need to tell their story, too.

Suggestions for Supervisors

A. Arrange a debriefing for all workers involved in the disaster (see below).

B. Line personnel should have an opportunity to participate in a critique of the event. Often, a critique is limited to officers and supervisors, but line staff participation can assure that workers are recognized for their contribution to the operation. Also, their viewpoints are valid and valuable input toward improving operations the next time around.

C. The organization can help workers and their families by setting up a meeting to provide them with information about the event, as well as education about normal stress reactions in workers and the potential effects of such stress for the family.

D. Formal recognition by the organization of a worker's participation in a disaster operation can mean a lot. A letter in the individual's personnel file, or a certificate of appreciation for contribution to an unusual and important job, lets the worker know that his participation meant something. Workers who remained at the office or station "minding the store" during the disaster should also receive recognition; their contribution was also essential.

E. Managers and supervisors should plan for the letdown their staff may experience. It may be helpful to go over the list of stress reactions in a staff meeting and discuss them. Emphasize that they do not imply weakness or incompetence; it is similar to being wounded in action (Mitchell, unpublished paper).

F. If workers' reactions are severe or last longer than 6 weeks, encourage them to use professional assistance. Again, it does not imply weakness—it simply means that the event was so traumatic it has had a profound effect on the individual.

Debriefings

A debriefing is an organized approach to the management of stress responses following a traumatic or critical incident (Mitchell 1983b). It is a specific, focused intervention to assist workers in dealing with the intense emotions that are common at such a time. It also assists workers by teaching them about normal stress responses, specific skills for coping with stress, and how to provide support for each other.

A debriefing involves a one-to-one or group meeting between the worker(s) and a trained facilitator. Group meetings are recommended, as they provide the added dimension of peer support.

A debriefing is not a critique. A critique is a meeting in which the incident is discussed, evaluated, and analyzed with regard to procedures, performance, and what could have been improved upon. A critique is a valid and important meeting. It can help workers to sort out facts, get questions answered, and plan for what to do in the future. A debriefing has a different focus: that of dealing with the emotional aspects of the experience.

It will not work to combine a critique and a debriefing in the same meeting. The goals and focus of the two meetings are entirely different. If an attempt is made to combine them, personnel may be much more comfortable analyzing logistics of the operation than dealing with the feelings involved, and the critique is all that occurs.

The basic ground rules for conducting a debriefing follow.

Who Should Attend

Everyone who participated in the incident should attend, unless the group is too big, in which case it can be split into smaller groups. Multidisciplinary groups with police, firefighters, paramedics and EMTs, emergency room nurses, etc. are good; they bring together the whole "team" (Mitchell 1983a, b). Command officers and line staff should participate in the same debriefing. The media should be excluded if they are wishing only to observe; if they were part of the traumatic incident, they should participate in the debriefing as a participant, observing confidentiality like all other participants.

Mandatory vs. Optional Debriefings

Opinions vary as to whether debriefings should be mandatory. Many departments are moving in the direction of making debriefings routine and mandatory after any critical incident. This policy gives personnel the message that (1) the organization is concerned for workers' well-being, and (2) the debriefing is a natural and routine procedure, with no stigma attached. When debriefings are not mandatory, personnel who might benefit may not attend, due to fears of being labeled "weak."

Who Conducts the Debriefing

The debriefing should be conducted by an experienced mental health facilitator. A professional facilitator is recommended because the emotions expressed in a debriefing may overwhelm an untrained facilitator (Mitchell 1983b). The facilitator should be skilled in group dynamics and communications, use a crisis intervention approach, have a good knowledge of stress response syndromes and interventions, and be well-versed in operational procedures of emergency service organizations (Mitchell 1983a).

When a Debriefing Should Be Held

The best time to hold a debriefing is about 24 to 48 hours after the incident. Prior to that time, workers may still be emotionally "numb," either from the shock of the incident or because their feelings are still being suppressed. Workers are also in the process of intellectually restructuring the incident, often trying to figure out if they operated "by the books" (Mitchell 1983b). At the 24- to 48-hour period, emotions are often surfacing in an intense form, and this is a good time to deal with them. Effectiveness diminishes with the passage of time between the event and the debriefing (Titchner 1982). Every effort should be made to conduct the debriefing within 6 weeks of the event. However, successful debriefings have been conducted up to a year or more after a traumatic incident.

How Long a Debriefing Should Take

Usually, 2 to 4 hours should be allowed for a debriefing. In some situations, it may take longer. It is usually wise to block out a morning or afternoon to devote to the debriefing.

An outline of the format for conducting a debriefing is presented in part I of this monograph. The audiovisual materials and recommended readings cited under "Supplementary Materials" at the end of this section will provide detailed material for trainers or participants who wish to conduct debriefings.

Followup, Referral to Mental Health Resources, Counseling

Each organization should have some means of monitoring individuals' recovery from traumatic events or incidents. This may take place as a routine followup meeting (group or individual) with the debriefing facilitator, meeting between supervisor and employee, or routine medical check with the employee health nurse or physician. The purpose of the followup is to allow the worker further opportunity to talk about his/her feelings about the incident and also to assess with the individual whether the symptoms are diminishing. A good time to do a routine followup is about a month to 6 weeks after the event.

If workers are still having difficulty with stress symptoms at that time, a routine referral to a mental health counselor should be suggested. The organization should have a preestablished plan for referrals to counselors who are knowledgeable or specialize in working with emergency service personnel. Fee arrangements should be preestablished. The ideal arrangement is for mental health services to be available to emergency workers through their prepaid employee health plan. Many plans do not provide this coverage, and personnel are often angry if they find that they must pay for counseling services out of their own pocket, when the trauma was a work-related event. This can produce a real barrier to personnel obtaining the services they need to remain functional and productive on the job.

Section 1 of this manual identified some of the barriers that may inhibit personnel from using mental health services. Often, they may simply lack knowledge about the *process* of counseling and what it entails. They should know that most counselors prefer to work with emergency workers in a short-term, active approach. Counselors often use specific techniques aimed at symptom reduction. They usually do not use long-term, psychoanalytic approaches. Occasionally, depending on the nature of the problems, marital or family therapy may be suggested. [See Activity 5-1.]

Prevention of Burnout

Burnout is an end product of unmitigated stress. The ultimate goal of this manual has been to help emergency workers learn ways to cope with stress in order to prevent burnout. However, although this text has dealt primarily with disaster, emergencies, and traumatic stress, many other factors and stressors contribute to burnout for emergency service workers.

Most experts emphasize a two-pronged approach to prevention of burnout:

1. *Taking care of yourself*: developing a healthy lifestyle, dealing with stress as it occurs, taking advantage of opportunities for growth and professional development, trying to see situations as a challenge rather than a threat

2. *Dealing with the environment*: eliminating stressors where possible, identifying problems, developing an action plan to solve problems, setting realistic goals, setting priorities, following through on goals and plans, recognizing accomplishments and feeling good about them

Survivors

Emergency and disaster workers are highly motivated and highly trained individuals. They perform strenuous, stressful, and often dangerous work. They seek to ease the suffering of victims. At the same time, they put themselves at high emotional risk for stress reactions that may be harmful to themselves, their work life, and their family life.

This monograph has presented material to assist workers in dealing with the stresses that are a part of their work. At the same time, it is important to remember and give recognition to the inherent strengths and qualities of the people who do this work. They embody the traits of the survivor personality:

- A sense of commitment to and involvement in life; strong commitments, clear values, and things they believe in

- Paradoxical traits of gentleness and strength, trust and caution, self-confidence and self-criticism, dependence and independence, toughness and sensitivity

- A feeling of control over their circumstances, and the willingness to admit what can't be controlled

- The ability to see change as a challenge, not just a threat; the commitment to meet challenges in a way that will make them stronger persons (Kessler 1984).

Emergency and disaster workers are survivors. They can see both the positive and negative sides of any situation. They like to challenge themselves. They intend to survive—and to do so in good form (Kessler 1984).

In the words of Thomas Drabek (1984), noted sociologist who has contributed tremendously to our understanding of disaster and disaster recovery, "People do climb mountains."

Supplementary Materials

Audiovisual Materials

The following materials are recommended to augment the lecture material. Guidelines for their use are included in the appendix.

- "Burnout"
- "Conducting Critical Stress Debriefings for Emergency Personnel"

Recommended Readings

Mitchell, J. T. When disaster strikes. . . . The critical incident stress debriefing process. *Journal of Emergency Medical Services* 8:36–39, January 1983.

Activity

Activity 5–1

Time required: 15–20 minutes.
Materials required: newsprint and pens, or blackboard and chalk.

Have participants develop two lists on newsprint or on the board. One list will include any *negative* thoughts, phrases, images, or ideas that come to mind when thinking of using mental health services. Typical examples include "crazy," "weak," and "psychotic." The second list will include *positive* thoughts, phrases, images, or ideas that come to mind when thinking of using mental health services. Some examples might include "healthy," "healing," and "working through things."

The key to this exercise is for the trainer to allow ample discussion time to bring out all issues that might constitute barriers to personnel using mental health services, and to provide factual information to address questions and concerns.

Ask the group such questions as "What concerns would you have about using mental health counseling?" "What do you think would keep you from using such services?" Besides concerns about image and stigmatization, personnel often have concrete questions about the procedure or process of counseling, fees, what records will be kept on them, confidentiality, and whether mental health treatment will impair their opportunities for promotion.

If a preestablished plan exists with a mental health center or group for providing these services, it may be a good idea to have a counselor from that group, as well as a member of the organization's top management team, present for the discussion, in order to accurately answer questions and allay anxieties and fears.

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Appendix

AUDIOVISUAL AND PRINTED MATERIALS

- Films and Tapes
  - Burnout
  - Conducting Critical Stress Debriefings for Emergency Personnel
  - Disaster Sights and Sounds
  - Friends
  - Human Response to Disaster: Training Emergency Service Workers (and Disaster Response Personnel: Stress and Coping Techniques)
  - The Hyatt Disaster: The Hidden Victim
  - Managing Stress, Part I: The Time Bomb Within
  - Relations
  - Relaxation and Stress Management Program
- Brochures
  - Can Friends Help You Stay Well?
  - Friends Can Be Good Medicine

"Burnout."

Produced and directed by J. Gary Mitchell and John McDonald, MTI Teleprograms, Inc. 26-minute videocassette, ½".

Oriented toward workers in the helping professions (human services, health services, police departments), this videotape defines burnout, lists stressors contributing to it, and describes its symptoms. Scenarios are "cute" but accurate in portraying the burnout syndrome. The videotape provides good, realistic suggestions for preventing and dealing with burnout.

Suggestions for use: Much useful information is acted out in the scenarios and could be missed without good observation. The tape may be enhanced by having class members act as observers, recording the following points for discussion after the videotape:

- What do you observe as stressors contributing to burnout in the scenarios?
- What do you observe as stress symptoms in the characters in the scenarios?
- What do you see as healthy responses to stress in the scenarios?
- What changes might be made in the organizational setting to reduce the stresses on workers?
- What do you experience as stressors contributing to burnout in your own job and/or organization?
- What signs of burnout have you experienced in yourself or your coworkers?
- What approaches do you find helpful?
- What changes in your work setting might help to reduce the potential for burnout? How might you work toward such positive changes?

For rental or purchase, contact:

MTI Teleprograms, Inc.
3710 Commercial Avenue
Northbrook, IL 60062
(800) 323-6301

"Conducting Critical Stress Debriefings for Emergency Personnel." Jeffrey Mitchell, Ph.D., Emergency Health Services Program, University of Maryland, Catonsville, MD. One 90- and one 60-minute audiotape cassette.

This lecture was presented at the Second National Conference on the Treatment of Post-Traumatic Stress Disorder, Chicago, IL, 1983. It is oriented toward mental health professionals who will be working with emergency service workers. Rich with anecdotal and clinical examples, it outlines the history of critical incident stress and common reactions and symptoms experienced by emergency workers. It also details the technique of debriefing.

Suggestions for use: This audiotape is emotionally moving and an excellent vehicle for helping individuals understand the experiences of emergency workers. All or selected parts of the tape can be used. The tape will be most effective if combined with discussion of such questions as:

- How did you feel as you listened to the incidents presented in the tape? What would have been most difficult or stressful for you in any of the situations presented?

- As an emergency worker, have you had experiences similar to those described in the tape? What were your personal experiences and reactions? What coping techniques did you find most helpful? Have you ever been involved in a debriefing? Was it helpful? Why or why not?

- As a mental health worker, how do you think you might have intervened in any of the incidents? What do you think it would be like for you to provide mental health services during or following these incidents? How would you deal with your own feelings of stress in helping these workers?

For purchase, contact:

SERCO Marketing
600 Wayne Avenue
Dayton, OH 45410
(800) 654-2400 or in Ohio (513) 223-0012
Tape #M. Price: $10.50.
Allow 4-6 weeks for delivery

"Disaster Sights and Sounds."
American Red Cross. 8-minute film, 16 mm.

This film shows actual scenes from various disasters, including flood, tornado, and hurricane, with disaster workers functioning in various settings.

Suggestions for use: The film is useful for establishing mood and atmosphere for training about disaster. It can be used to help trainees identify with both disaster victims and disaster workers when the following suggestions are made prior to viewing the film:

- Let yourself identify with the experience of individuals in the film. See who you identify with most strongly.
- Pay particular attention to the disaster workers in the film. What do you think it would be like to be in the various roles portrayed in the film?

Following the film, these questions might be used for discussion:

- Which scenes in the film affected you most? What were your feelings as you watched those scenes?
- Who did you identify with in the film? What do you imagine it would have been like for you to be in their place?
- What disaster workers did you identify with in the film? What do you think it would have been like to be in their roles?

For purchase, contact:

General Supply Office
American Red Cross
17th and D Streets, NW
Washington, DC 20006
Stock #321535
Price: $57.00

For rental, contact local chapter of American Red Cross to see if film is available for lease.

"Friends."

State of California Department of Mental Health. 9-minute film, 16 mm., ¾" video, ½" VHS, beta.

Documentary and dramatic sequences in this upbeat film emphasize the importance of friendships in times of high stress. It interweaves comments from professionals of all ages about the value of friends. It also contains a brief discussion of the medical evidence regarding health and social support networks.

Suggestions for use: This film is useful in raising awareness of the relationship between social support and health. The message is straightforward and positive and does not dwell on the complexities of relationships. This film is appropriate for triggering discussion and can be used in conjunction with activities from the booklet *Friends Can Be Good Medicine*.

For rental or purchase, contact:

California Department of Mental Health Film Library
1600 9th Street
Sacramento, CA 95814
Price: *California resident*: Free loan/$75.00 purchase
Non-California resident: $50.00 rental/$150.00 purchase

"Human Response to Disaster: Training Emergency Service Workers."

Diane Garaventa Myers, William T. O'Callahan, and Jack Peuler. Produced by the National Institute of Mental Health and State of California Department of Mental Health, in cooperation with the Federal Emergency Management Agency. Six 20-minute videocassettes, ½".

This series of videotapes provides a comprehensive overview of mental health issues in disaster. It was designed to assist mental health workers, emergency service workers, and disaster workers from voluntary disaster relief agencies in understanding and meeting the psychological needs of disaster victims and workers. The six videotapes cover the following topics:

1. Understanding Disaster and Disaster-Related Behavior
2. Impact and Rescue Phases: Issues and Interventions
3. Early Recovery Phases: Issues and Interventions
4. Late-Phase Recovery (2 Months to 1 Year): Issues and Interventions
5. Children and Disaster
6. Disaster Response Personnel: Stress and Coping Techniques

Suggestions for use: For mental health, emergency, or disaster workers with limited knowledge of the mental health aspects of disaster, this series of tapes provides basic information and approaches. It is recommended that each tape be viewed separately, followed by discussion of workers' questions, concerns, and the like. Specific suggestions for the tape on "Disaster Response Personnel" follow.

"Disaster Response Personnel: Stress and Coping Techniques."

This videotape will provide trainers with an overview of stress and coping techniques for emergency workers. It discusses stressors affecting disaster workers, types of accidents that are especially critical or traumatic, phases of worker reactions to emergencies, stress symptoms for workers during and after impact, and helpful mental health interventions. It emphasizes and details the technique of debriefing.

Suggestions for use: This videotape can be used as a whole or in sections to provide introductory lecture material for both mental health and emergency workers. It can be enhanced by asking trainees to tap their own experiences. The following topics may be useful for discussion:

- What types of events or incidents have you found to be most stressful?
- What are your usual stress reactions in emergencies?
- What coping techniques have you found most helpful? least helpful?
- Have you ever been involved in a debriefing? Was it helpful? Why or why not?

For rental or purchase, contact the State department of mental health. Each State has a complete set of these videocassettes. The lectures are in the public domain and may be reproduced as needed.

For further information, contact:

Center for Mental Health Studies of Emergencies
National Institute of Mental Health
Room 6C-12
Parklawn Building
5600 Fishers Lane
Rockville, MD 20857
(301) 443-1910

"The Hyatt Disaster: The Hidden Victim."
Produced by Margaret S. Miles, School of Nursing, University of Kansas Medical Center, and Alice S. Demi, Medical College of Georgia. 51-minute videocassette, ½".

Victims of the 1981 skywalk collapse at the Hyatt Regency Hotel in Kansas City discuss their reactions to the disaster. A television news reporter, an employee of the hotel, a husband and wife who were guests at the hotel, and an emergency medical technician share their feelings about the events that took place at the scene and in the year following the disaster. Ways they coped with their feelings are discussed. Dr. Margaret Miles, University of Kansas School of Nursing, conducts the interviews.

Suggestions for use: This videotape is quite long. Its effectiveness may be enhanced by using selected portions to illustrate specific training points. The interviews with the news reporter and the EMT are most useful in illustrating reactions of workers attempting to function at the scene. Interviews with the hotel employee and guests are excellent case studies of victim response and recovery. Discussion of tape segments might include such questions as:

- What were your feelings as you listened to the persons interviewed? What would have been most difficult or stressful for you if you had been in their positions at the disaster?
- What stress reactions and symptoms did you hear the interviewees describe? What coping techniques were most helpful to them?
- As a mental health worker, how do you think you might have intervened at the scene?
- Following the disaster, what interventions or programs would you implement to assist workers? How would you go about developing these?
- How might you have made contact and assisted the victims interviewed in the tape?
- How would you deal with your own feelings and reactions to assisting these workers and victims?

For rental or purchase, contact:

The Educational Resource Center
Room G004, Orr-Major Hall
39th and Rainbow Boulevard
The University of Kansas Medical Center
Kansas City, KS 66103
(913) 588-7343

"Managing Stress, Part I: The Time Bomb Within."
Howard Baumgartel, Ph.D., Organizational and Personal Psychology Graduate Program, University of Kansas. A Centron Production. 14-minute videocassette, ½".

This short film provides a comprehensive overview of stress, including a history of the stress response syndrome and physiological and emotional responses. It emphasizes work-related stress and accurately and realistically portrays stressors. It also outlines short- and long-term results of stress on health and relationships. The film describes positive methods of managing stress, emphasizing exercise, nutrition, support groups, and changes of pace.

Suggestions for use: The videotape is brief and succinct and would be a good stimulus for discussion of such points as:

- What stressors presented in the tape did you most identify with? How are they related to your own work role and responsibilities? What stressors exist in your work that were not brought out in the tape?
- What suggestions for dealing with stress seemed most relevant to you? least useful? Why? What other coping mechanisms have you found helpful?

For rental or purchase, contact:

Organizational and Personal Psychology Graduate Program
University of Kansas
Kansas City, KS

"Relations." State of California Department of Mental Health. 24-minute film, 16 mm., ¾" video, ½" VHS, beta.

This film explores the complexities and paradoxes encountered in trying to make and maintain supportive personal relationships. It contains a variety of improvisational sketches dramatizing different relationships: among men in a men's support group; in a professional peer group; between husband and wife, brother and sister, man and machine; and in romantic and platonic friendships. Ed Asner and Avery Schreiber play various roles.

The film at times raises the darker side of relationships, illustrating that they can be complex and paradoxical and therefore difficult to achieve and maintain. It emphasizes that barriers to social support are easier to surmount when they are illuminated.

Suggestions for use: This film is excellent for stimulating discussion about the difficulties in establishing and maintaining healthy, supportive relationships. Each scene has multiple interpretations. The film can be shown in its entirety, but it is most effective in short segments, allowing for intermittent audience discussion. *It is not effective without a discussion*. The film comes with a *Discussion Leader's Guide* that gives background information on the film's purpose, the underlying themes in each scene, and discussion topics. It is appropriate for use in staff development of helping professionals, in human relations classes, and in establishing support groups or support networks.

For rental or purchase, contact:

California Department of Mental Health Film Library
1600 9th Street
Sacramento, CA 95814
Price: *California resident*: Free loan/$185 purchase
Non-California resident: $50.00 rental; $370.00 purchase

"Relaxation and Stress Management Program."
Three audiocassettes and a 52-page guide to stress management.

The cassettes include musical and environmental backgrounds. The accompanying guide includes a step-by-step approach to stress management. Tapes include the following topics:

Tape 1: Progressive Relaxation and Deep Muscle Relaxation

Tape 2: Autogenic Relaxation: Arms & Hands and Legs & Feet

Tape 3: Visual Imagery Relaxation and Image Rehearsal Practice

Suggestions for use: The tapes and guide may be used in classroom instruction or for individual, self-guided instruction to stress management.

For purchase, contact:

Stress Management Research Associates, Inc.
P.O. Box 2232-B
Houston, TX 77251
(713) 890-8575
Price: Complete set: $34.95 plus $1.50 postage and handling
Individual tapes: $12.95 plus $1.50 postage and handling
Available for 15-day, money-back trial period.

"Can Friends Help You Stay Well?"
Three-page brochure.

This self-assessment brochure helps individuals ascertain their current levels of stress and the strengths of their support networks. The brochure takes 3 minutes to complete and provides individuals with graphic illustration of the relationship between their personal support systems and their stress levels. It may suggest that an individual needs to strengthen his/her support system.

Suggestions for Use: Designed for individual use, this is a useful tool for motivating people to pay attention to their personal relationships.

For purchase, contact:

California Department of Mental Health
Publications Unit
P.O. Box 1015
North Highlands, CA 95660
Stock #7540-956-1018-9
Price: Available only in bulk orders of 50 copies
$11.00 per order (includes tax, postage, and handling)

"Friends Can Be Good Medicine."
64-page booklet, 8½x11, two-color.

This booklet provides activities and readings on the multiple aspects of relationships. Sections include: What is social support? How can I recognize it? When do I or my family or friends need it the most? How do I get it? How does anybody get it?

Suggestions for use: The booklet contains self-assessment tools as well as homework, which can then stimulate classroom discussion. Individuals may apply information to current personal situations such as job stress, divorce, etc.

For purchase, contact:

California Department of Mental Health
Publications Unit
P.O. Box 1015
North Highlands, CA 95660
Stock # 7540-956-1011-6
Price: Available only in bulk orders of 10 copies
$10.00 per order (includes tax, postage, and handling)

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